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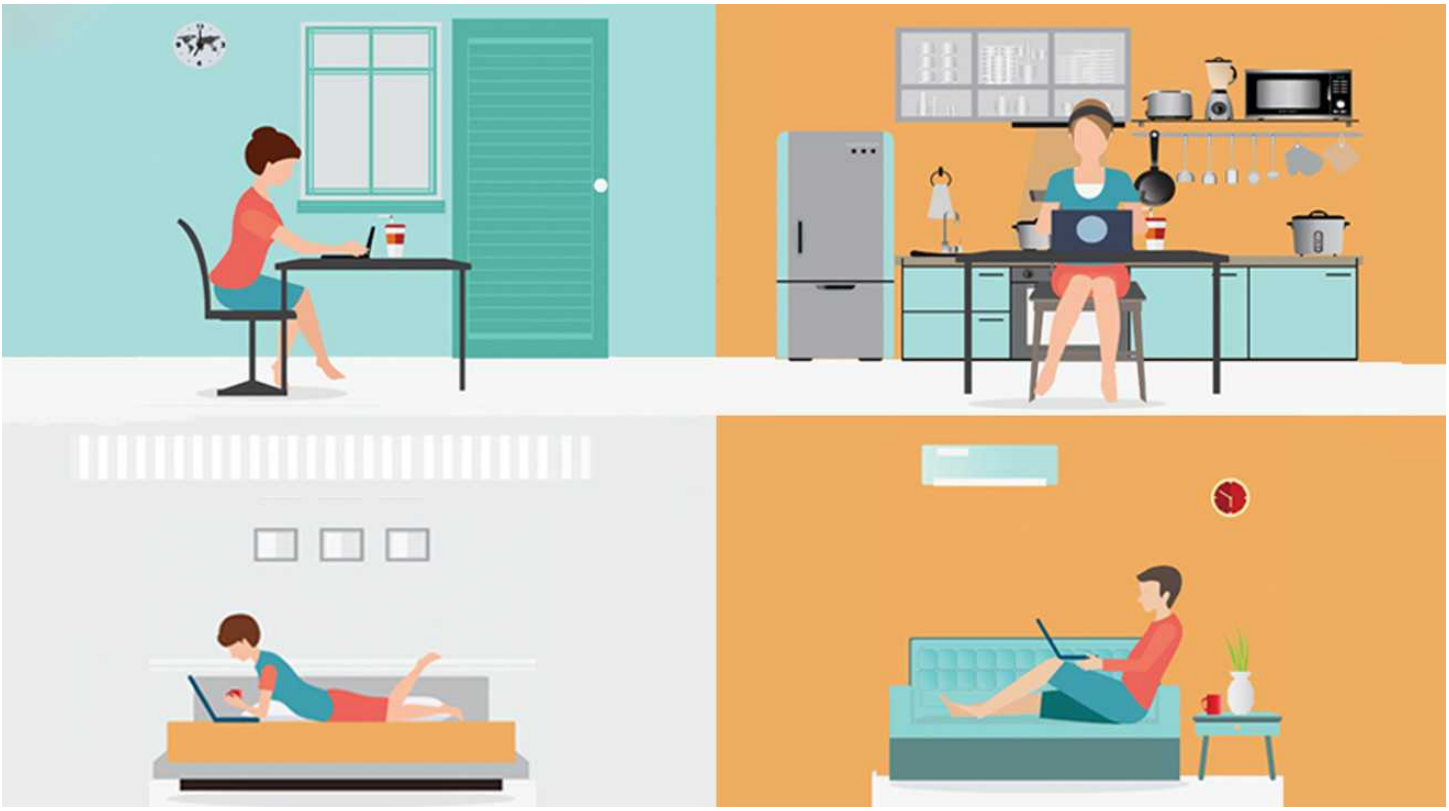
Mapping the New Normal

Asia Property: Working from Home, a New Challenge for Asia's Office Landlords



WFH is a cost saving opportunity for businesses. We expect tenants across Asia to surrender 3-9% of existing office space permanently, resulting in a rent decline of 10-15% over the next three years. Prefer office stocks in Hong Kong and India over Australia and Japan.

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Mapping the New Normal

Asia Property: Working from Home, a New Challenge for Asia's Office Landlords

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Analysing the long-term impact of WFH: Office rentals across Asia declined 2-13% in 1H20 owing to weaker demand (negative GDP, higher unemployment), and we expect this to continue in 2H20. The bigger concern for landlords, however, is that a portion of existing employees continue to work from home (WFH). This report, a collaborative work across the Asian region, is an attempt to quantify the *rental impact* on six key financial capitals over the next three years. We also identify the winners and losers based on "what is already in the price."

Office spaces are important for tenants and landlords (and thus stocks): The top 6 cities in Asia account for US$0.8 trillion worth of Grade A office space as of December 2019, by our estimate. For tenants, we estimate that office rental could be as high as 15-20% of fixed operating costs.

AlphaWise survey of office workers in HK, Australia, the UK, and the US – four key revelations: (1) The majority of employees would like the flexibility to work from home. (2) Most don't want to work from home every day (except in Australia). In HK, the majority would like WFH <3 days (mostly 1 day) per week, but >40% of Australians would like to work from home every day. (3) Most HK-based respondents don't want to share desks. (4) Respondents cited the biggest challenge with WFH as infrastructure issues (57%), not space constraints (25%).

WFH impact on demand and rental – 3-9% lower demand and 10-15% lower rental: We expect big tenants (financial institutions, IT) with well established BCP/WFH infrastructure to return 10% of their existing office space to landlords over the next three years. This will be achieved by asking certain functions to work from home permanently (HR, some parts of IT, back office), offshoring to cheaper locations (India, Vietnam, and desk sharing. However, we believe the intangible benefits of social connection, collaboration, and social distancing will keep the number from rising further.

WFH is rapidly changing the trend and will benefit re-centralization and more flexible workspaces, in our view.

Regional comparison: We prefer HK and India over Japan and Australia, driven by four factors. (1) Tenants are expected to return space in financial centers in developed economies, but we see limited impact in China and India. (2) Tokyo is the only city where rental increased in 1H20; thus, we expect more rental downside from here. (3) Hong Kong showed the worst decline (-13%) in rental in 1H20, implying that a lot of bad news is in the price. (4) Sydney and Tokyo have the highest supply addition over the next three years, putting cyclical pressure on rents. (5) HK and Indian stocks are trading at 55% discounts to NAV – and more importantly, 30% deeper than the long-term average.

Stock picks: We see more downside to Suntec REIT, GPT and Mitsui Fudosan. On the other hand, SHKP, HK Land and DLF are pricing in worst-case scenarios with regard to WFH.

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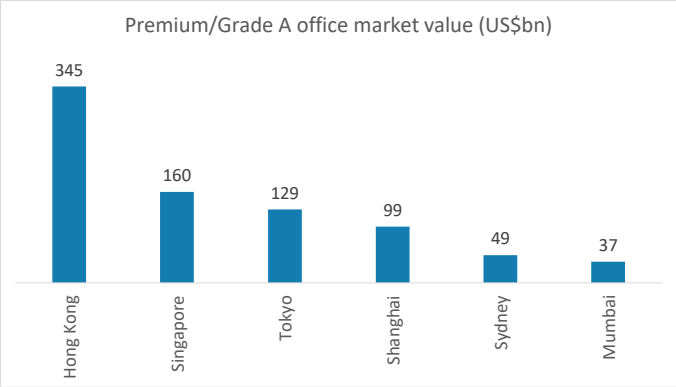
Key Charts

Exhibit 1:

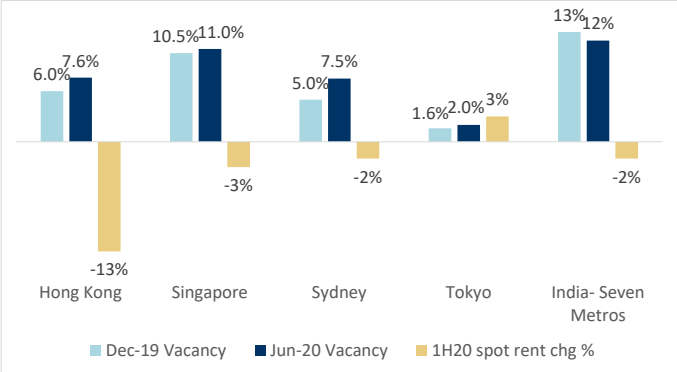
Major cities – office market value



Source: Total market value is estimated using office stock from respective government sources, JLL/ CBRE estimates multiplied by ASP estimated by respective regional property analysts from Morgan Stanley Research

Exhibit 2:

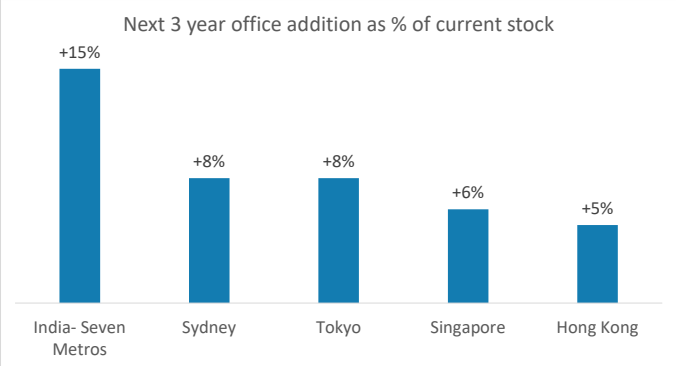
Changes in vacancy and spot rent in 1H20



Source: JLL, CBRE, Morgan Stanley Research

Exhibit 3:

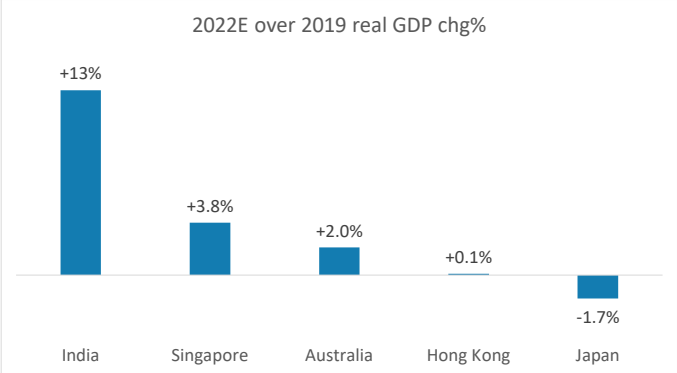
Next three years' office supply



Source: JLL, CBRE, Morgan Stanley Research

Exhibit 4:

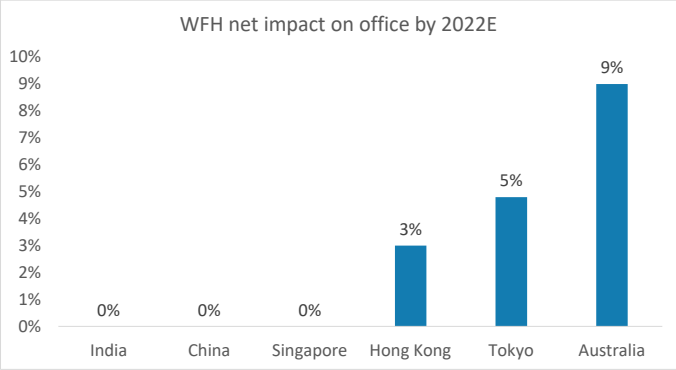
Real GDP growth between 2019 and 2022E



Source: Morgan Stanley Research (E) estimates

Exhibit 5:

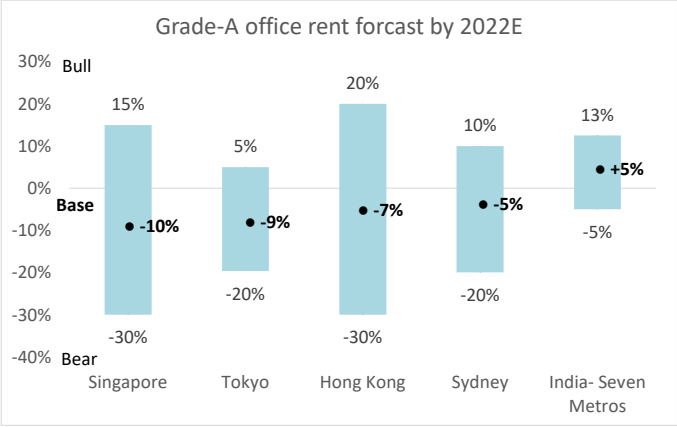
Office demand – net impact of WFH



Source: WFH impact is estimated by regional Morgan Stanley Research property team based on results from AlphaWise survey

Exhibit 6:

Grade A office rent forecast bull and bear cases (Jun-20 to Dec-22)



Source: Morgan Stanley Research (E) estimates

Investment Conclusion

(1) Why write this report now?

In the early waves of the COVID-19 crisis across Asia, roughly 80% of employees were working from home without apparent productivity loss, based on our AlphaWise survey. More importantly, a majority of employees have stated they would like to continue working from home even after COVID-19 normalizes. This report is a collaborative work by research analysts across the region to answer this key question:

- "What permanent impact will WFH have on vacancy and rental for key cities in Asia and how much is in the price of various stocks (we identified 15 stocks in five countries)?"

(2) Importance of office for the real estate industry

In Asia, the top six Grade-A offices in the major cities (Hong Kong, Singapore, Tokyo, Sydney, Shanghai, Mumbai) are worth US$0.8 trillion as of December 2019, by our estimate: This is calculated by multiplying the gross floor area by rental and dividing by the cap rate for each region.

We highlight 15 stocks in Asia whose share prices move with the office outlook, owing to their GAV exposure to office of more than 50%: For tenants, office rental accounts for roughly 15-20% of their fixed operating costs and thus is worth their attention.

(3) AlphaWise survey in Hong Kong, Australia, the UK, and the US

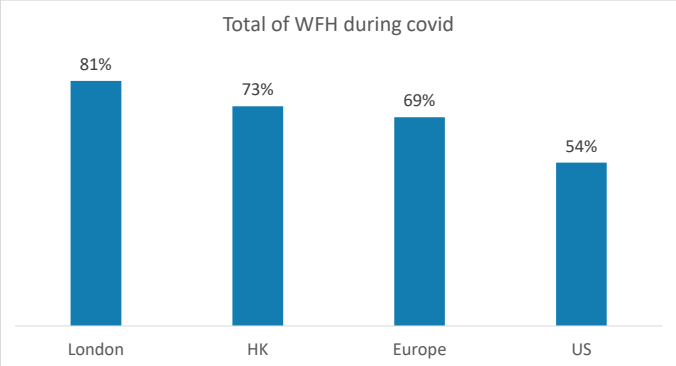
We conducted a flash survey in HK (sample size 698), Australia (sample size 937), the UK (sample size 4,500,) and the US (sample size 2,000) from April to July.

Our conclusions:

1. The Majority of employees (75-90%) would like the flexibility to work from home in future even when COVID-19 is past.
2. However, most of them would not like to work from home every day (except in Australia). In HK, the majority would like to work less than three days (mostly one day) per week from home. More than 46% of Australians would like to work from home every day.
3. Most HK respondents (more than 50%) do not want to share desks.
4. The biggest complaint against WFH is infrastructure issues (57%) and not space constraints (25%).
5. During the early stages of COVID-19, 70-80% of employees were working from home, but in the US, only 54% were working from home. This may be because the survey was across the US and not just in New York City.

Exhibit 7:

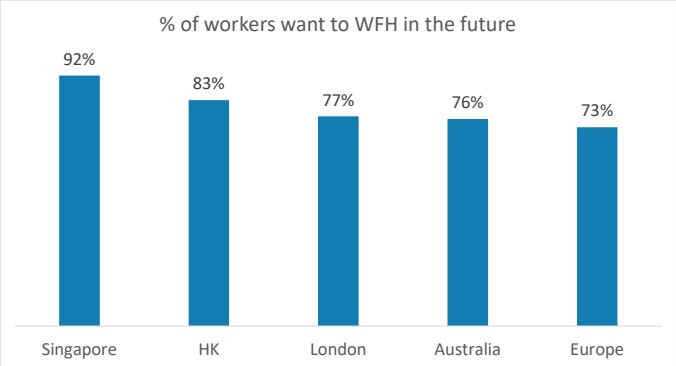
Total percentage of respondents WFH during COVID



Source: AlphaWise Note: Surveys were conducted as follows: Europe/UK: 15-21 June; HK: 20-23 July; US: 4 April to 14 July.

Exhibit 8:

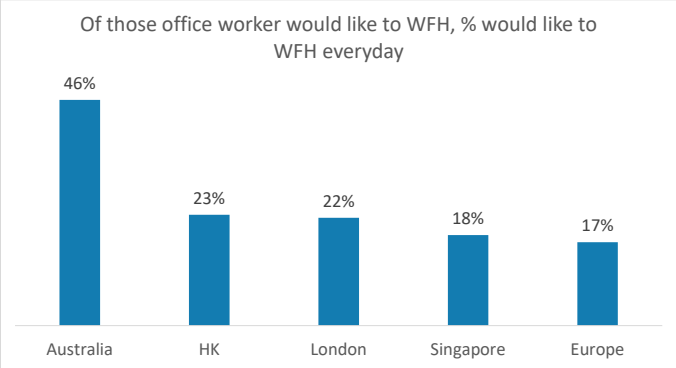
Intention to WFH in the future



Source: AlphaWise, Singapore data from Engagerock.co

Exhibit 9:

Intention to WFH every day

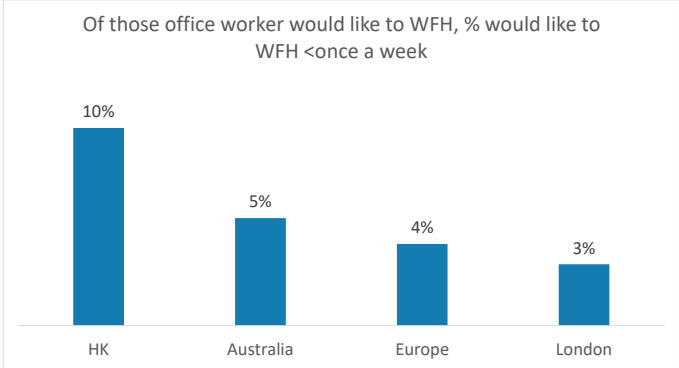


Source: Australia/HK/London/Europe data from AlphaWise, Singapore data from Engagerock.co

Note: Australia data is "prefer WFH >4days/week". Singapore data -% saying based on "my current experience working from home, I can see myself 100% WFH effectively after COVID 19."

Exhibit 10:

Preference to WFH <once/week



Source: AlphaWise, Morgan Stanley Research

(4) Quantifying the impact of WFH on vacancy and rent

(A) Rental outlook without factoring in WFH: Based on our analysis, office demand is directly and strongly correlated to GDP in every region. With 1H20 largely behind, the key is how much lower/higher will 2022 GDP be. This, along with supply growth (over the next three years) versus normal annual increase, drives our rental outlook. The mitigating factors have been robust trading activities and listing of Chinese companies in Hong Kong (as they move out of the US). Limited new supply in Hong Kong helps too.

(B) We identify five key drivers of WFH decisions:

1. What percentage of overall office space is occupied by financial, professional, and TMT workers, which could easily work from home if need be?
2. How many organizations have WFH capability or business continuity planning (BCP) in place?
3. Does the country's digital infrastructure allow for seamless WFH?
4. Does the size of residential apartments and age of employees (family commitments) allow for effective WFH?
5. What other measures are in place to promote flexible work, such as flexible office, flexible hours, flexible days?

(C) Quantifying the WFH impact:

Base case: Around 40% of all employers (with IT infrastructure and knowledge workers) are able to return 10-15% of their space. This results in a decline in office demand of 4-6% initially. However, part of this is offset by social distancing requirements, driving desk space per person to rise (by 10-15% according to Cushman), although we think employers will keep that flattish at best. As shown in **Exhibit 11**, we expect the largest rental declines to be in Hong Kong (-10%) and Tokyo (-9%).

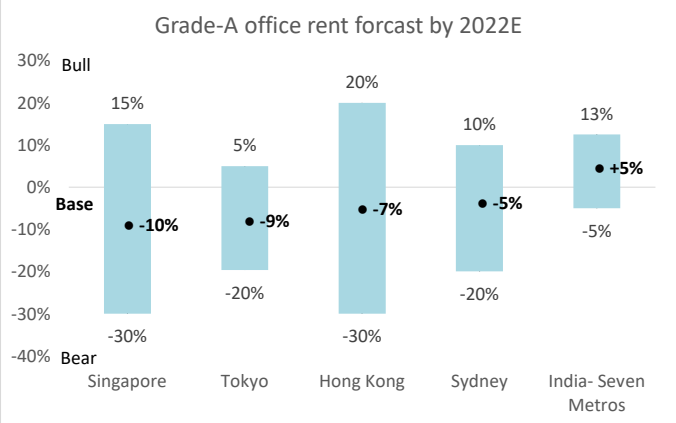
It is difficult to pinpoint exactly how much demand has declined as a result of WFH, so we have tried to build bull and bear case scenarios for cities in Asia. In our bull case, we assume no impact from WFH and a strong V-shaped recovery with positive GDP growth. The bear case assumption is significant demand decline owing to WFH, with no help from social distancing and muted GDP growth. We see that Singapore and Hong Kong face the worst bear case scenarios of a 30% decline in rental from here. They are dependent on global cyclicality and have had historically higher volatility in rental income.

Bull case: We assume that most companies don't implement WFH fully. While workplaces provide flexibility for employees to work from home, they also provide a dedicated office desk. This came through clearly in our survey, where respondents said they want flexibility but do not want to work from home all five days a week. In our bull case, we also assume that social distancing requirements might increase office space per person by 10% over the next three years. In most locations, this number has been falling in the last 10 years and is roughly at 100 sq. ft.

Bear case: In our bear case, we assume that 10-15% of all employees work from home. This is achieved either through desk sharing or asking certain functions to work from home permanently. The other possibility is that more functions get moved to low-cost areas like India and Vietnam. In addition, companies may choose not to increase office space per employee as COVID-19 comes under control sometime in 2021.

Exhibit 11:

Grade A office rent in key Asian cities (Jun-20 to Dec-22E)



Source: Morgan Stanley Research (E) estimates

(5) Preference within Asia

We prefer HK and India over Japan and Australia for the following reasons:

1. Tenants are expected to return space in financial centers in developed economies, but we see limited impact in China and India.
2. Tokyo is the only city where rental increased in 1H20; thus, we expect more rental downside from here,
3. Hong Kong showed the worst decline (-13%) in rental in 1H20, implying that a lot of bad news is in the price.
4. Sydney and Tokyo have the highest supply addition over the next three years, putting cyclical pressure on rents.
5. Valuations in HK, Japan, and India look attractive – the stocks are trading at discounts of more than 50% discount NAV. However, compared to the long-term average, stocks are all trading at discounts, with the deepest discounts in Hong Kong and India.

Exhibit 12:

Asia – office markets: key information

	Hong Kong	Singapore	Sydney	Tokyo	India- Seven Metros
YTD office spot rent decline %	-13%	-3%	-2%	+3%	-2%
Vacancy chg YTD since Dec-2019	From 6.0% to 7.6%	From 10.5% to 11.0%	From 5.0% to 7.5%	from 1.6% to 2.0%	from 13% to 12%
Total stock Grade A office	99mn sq.ft	86mn sq.ft	32mn sq.ft	124mn sq.ft	592mn sq.ft
Total value (US$mn)	345	160	49	129	90
New supply in the next 3 years	+5%	+6%	+8% (Prime Grade)	+8%	+15%
Relevant stocks	- HK Land (HKLD.SI)	- KREIT (KASA.SI)	- Dexus (DXS.AX)	- Mitsubishi Estate	- DLF
	- Swire Prop (1972.HK)	- CCT (CACT.SI)	- Mirvac (MGR.AX)	- Sumitomo R&D	- Embassy Office Parks
	- SHKP (0016.HK)	- Suntec (SUNT.SI)	- GPT (GPT.AX)	- Mitsui Fudosan	- Prestige Estate
Total market cap (US$mn)	56,843	10,317	18,486	50,110	9,336

Source: Refinitiv, Office stock and future supply, rent YTD and vacancy sourced from JLL and respective government sources,

Exhibit 13:

Asia – office markets: key conclusions

	Hong Kong	Singapore	Sydney	Tokyo	India- Seven Metros
1. Current NAV discount	-55%	-20%	-15-20%	-55%	-50%
2. Current disc vs. Long-term avg	-30%	-5%	-20%	-20%	-30%
3. Stock YTD %	-26%	-16%	-28%	-27%	-30%
4. Versus Index	-14%	+4%	-18%	-23%	-22%
5. WFH Impact by 2022E	-3%	0%	-9%	-5%	0%
6. 2022 office rent / Jun 2020	-7%	-10%	-5%	-9%	+5%
7. 2022 real GDP / 2019 real GDP	0%	+4%	+2%	-2%	+13%

Source: Stock performance from Refinitive, GDP outlook from Morgan Stanley Economist latest estimates, WFH impact estimated by Morgan Stanley Asia Property team

(6) What is priced in and stock picks

We prefer HK Land, SHKP, and DLF among regional real estate companies with high office exposure.

The least preferred stocks are Suntec REIT, GPT and Mitsui Fudosan.

What is priced into property stocks? Among the 15 big-cap stocks we have identified, Swire Properties, HK Land, Mirvac, Mitsui Fudosan and DLF have declined the most, while SHKP, CACT and Embassy REIT have been more resilient in 1H20. We compare the current P/BV or discount to NAV to the long-term average for each and find that HK Land and Swire Properties have factored in as much as a 40% decline in rental from the current level, which is unlikely, in our view. On the other hand, current rental in Japan is at an all time high (+3% YoY), and stocks have declined 24% in 1H20 and are currently trading at a 20% discount to the long-term average. Thus, we see more downside from here.

Exhibit 14:

Key Overweight stocks

		PT	P/BV (x)	Div Yield	Why OW?
Stock	Rating	(Upside)	FY0	FY1	
SHKP (0016.HK)	OW	HK$131 (+42%)	0.67	5.4%	(1) BV has doubled in the last 10 years with the help of rental growth, without raising gearing and cap rate compression. (2) Current valuation of 0.5x PB and 5% yield is one of the cheapest the stock has shown historically. (3) Offices are expected to benefit from re-centralization and positive rental reversion.
HK Land (HKLD.SI)	OW	US$5.3 (+37%)	0.32	5.7%	(1) Earnings growth is supported by development property sales in China, and is benefiting from China's recovery. (2) The company is a proxy for the Central office market in HK and the stock is implying that rents fall >40%, which is overly bearish, in our view. (3) Gearing ratio should be stable as the company switches to land-replenishment mode.
DLF (DLF.NS)	OW	INR211 (+52%)	1.32	1.4%	DLF is our top pick in the industry given its diversified business model, which includes both office and residential business, new asset creation cycle, steadily improving balance sheet, and inexpensive valuation. The company's plans to focus on middle-income housing and 'sell as you build' should help improve near-term cash flows.

Source: Morgan Stanley Research

Exhibit 15:

Key Underweight stocks

		PT	P/BV (x)	Div Yield	Why UW?
Stock	Rating	(Upside)	FY0	FY1	
Suntec REIT (SUNT.SI)	UW	S$1.4 (+0.7%)	0.66	5.1%	While SUN's dividend yield is higher than its office-REIT peers in Singapore, we think it offers the least attractive dividend growth outlook. We see headwinds to dividends from the negative impacts from the pandemic on its retail mall and convention centre businesses, and as the stock weans itself off capital distributions that have been supplementing dividends.
GPT (GPT.AX)	UW	A$4.2 (+1.9%)	0.72	4.9%	(1) Its active office development business (>A$1bn) is likely to be dormant, as vacancies rise across Sydney and Melbourne. (2) Close to 30% of its office portfolio has maturity in 2020/21 (vs. peers with lower exposure; c.25% for DXS and c.15% for MGR). (3) Around 40% of GPT's exposure is in Retail, with a large presence in Melbourne, which is going through a second lockdown.
Mitsui Fudosan (8801.T)	UW	¥1,700 (-7%)	0.67	2.4%	Among real estate developers in Japan, the company has an economically sensitive business portfolio relative to peers and its discount to NAV looks less appealing at around 40% vs. 60% for other developers. Also, the stock's dividend yield is lower than peers in the region.

Source: Morgan Stanley Research

Asia – Office Stocks: Comps Table

Exhibit 16:

Regional office comps table

						US$mn	LoC	LoC	%	P/BV (x)	P/E (x)	Div Yield	Net Gearing
	24-Jul-20	Ticker	Yr. End	FX	Rating	Mkt Cap	Closing Px	PT	Upside	FY0	FY1	FY1	FY0
Hong Kong	Sun Hung Kai Properties	0016.HK	Jun	HKD	OW	34,564	92.5	131	+42%	0.67	13	5.4%	13%
	Swire Properties	1972.HK	Dec	HKD	OW	13,223	17.5	23	+31%	0.47	19	5.0%	5%
	HK Land	HKLD.SI	Dec	USD	OW	9,056	3.9	5.3	+37%	0.32	12	5.7%	9%
Singapore	Keppel REIT	KASA.SI	Dec	SGD	OW	2,691	1.1	1.25	+14%	0.92	22	5.2%	44%
	CACT	CACT.SI	Dec	SGD	EW	4,794	1.7	1.80	+5%	0.97	23	4.5%	36%
	Suntec REIT	SUNT.SI	Dec	SGD	UW	2,832	1.4	1.40	+1%	0.66	19	5.1%	58%
Australia	Dexus	DXS.AX	Jun	AUD	OW	6,954	9.0	11.0	+22%	0.96	17	5.6%	34%
	Mirvac	MGR.AX	Jun	AUD	EW	5,836	2.1	2.6	+24%	1.03	16	5.3%	34%
	GPT	GPT.AX	Dec	AUD	UW	5,696	4.1	4.2	+2%	0.72	16	4.9%	33%
Japan	Mitsubishi Estate	8802.T	Mar	JPY	EW	20,754	1,593	1,700	+7%	1.26	21	1.6%	50%
	Sumitomo R&D	8830.T	Mar	JPY	EW	12,596	2,825	3,000	+6%	1.01	12	1.3%	89%
	Mitsui Fudosan	8801.T	Mar	JPY	UW	16,760	1,827	1,700	-7%	0.67	14	2.4%	74%
India	DLF	DLF.NS	Mar	INR	OW	4,596	139	211	+52%	1.32	32	1.4%	19%
	Embassy Office Parks	EMBA.NS	Mar	INR	OW	3,794	368	423	+15%	1.49	34	7.0%	14%
	Prestige Estate	PREG.NS	Mar	INR	OW	946	177	340	+93%	2.89	33	0.6%	159%

Source: Refinitiv, forward estimates from Morgan Stanley Research

Net Gearing= Net Debt/Total Equity

Total Equity in Japan is inclusive of unrealized gains (after tax).

Mapping the New Normal

Employees have always wanted flexibility, but the success of WFH during the COVID-19 outbreak has resulted in employers embracing the option of letting a portion of the workforce work from home permanently. This has been possible because of transformational changes in technology over the last 10 years (faster WiFi, 4G and 5G, Zoom, broadband, and cloud).

We highlight how the new normal looks from the perspective of landlords.

1. Office tenants will continue to return space as and when they can: Since normal lease terms are for 3-5 years, we expect this to spread over several years, during which companies will keep checking the morale and effectiveness of employees working from home to determine whether they can return more space or not.

In addition, companies will likely sign shorter future leases, even at a higher rent. The future is unknown, but we expect most tenants (~45% of Hong Kong office occupiers) to return 10% of their existing space in the first possible instance to test the effectiveness. To accommodate people, they will likely employ a combination of three strategies:

1. Relocating workers to low-cost locations (like India and Vietnam) if possible;
2. Identifying functions that can be permanently done from home (like editing, HR, back office); and
3. Desk sharing, where everyone works from home one day a week, which itself can save 20% of office space.

As an example, JLL, a real estate consultancy firm in Hong Kong , managed with desk space for only 80% of its employees for the last few years because, prior to COVID-19, at any given time 20% of its employees were out of the office traveling. Following COVID-19, with workers no longer traveling, the company is asking employees to work from home at least one day a week to manage capacity.

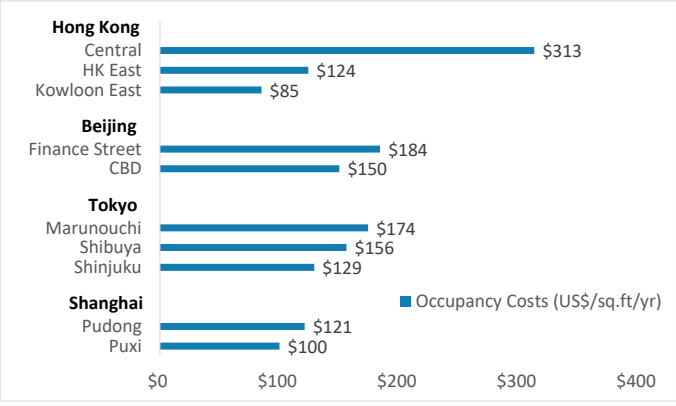
2. Emergence of flexible workspace: We believe that future solutions will involve a combination of WFH and working from the office. The most likely scenario, in our view, will include a 10-15% reduction in permanent space with additional demand being met through flexible work spaces (provided by companies like IWG and Regus). Demand for flexible workspace declined in 2H19 and 1H20, as the majority of workers stayed at home. However, as companies decide to shrink their existing permanent spaces, we expect them to rely even more heavily on flexible workspaces.

3. Social distancing and desk sharing: Across Asia, desk space per person has been declining for some time. We expect that to remain flat or grow if social distancing requirements are adhered to for longer. However, unless COVID-19 lingers for an extended period, we do not expect social distancing to drive office demand, as highlighted by many property consultants. On the other hand, more than 50% of respondents are against sharing their desks, although 6% of office-goers are already doing so. We think this percentage will rise over the next three years and may reach 10-20%.

4. Re-centralization: This could mean more vacancies at the decentralized locations as people either work from home or come to central office locations where it is easier to meet colleagues and clients. This is completely different from five years ago, when decentralization drove office rental at Island East in Hong Kong to rise faster than Central. Thus current high vacancies in Kowloon East may not affect overall Central office rental, in our view. As shown in **Exhibit 17** , Hong Kong has the highest office rent differential between premium office locations and secondary/decentralized business districts in Asia.

Exhibit 17:

Gross office rent comparison within key cities



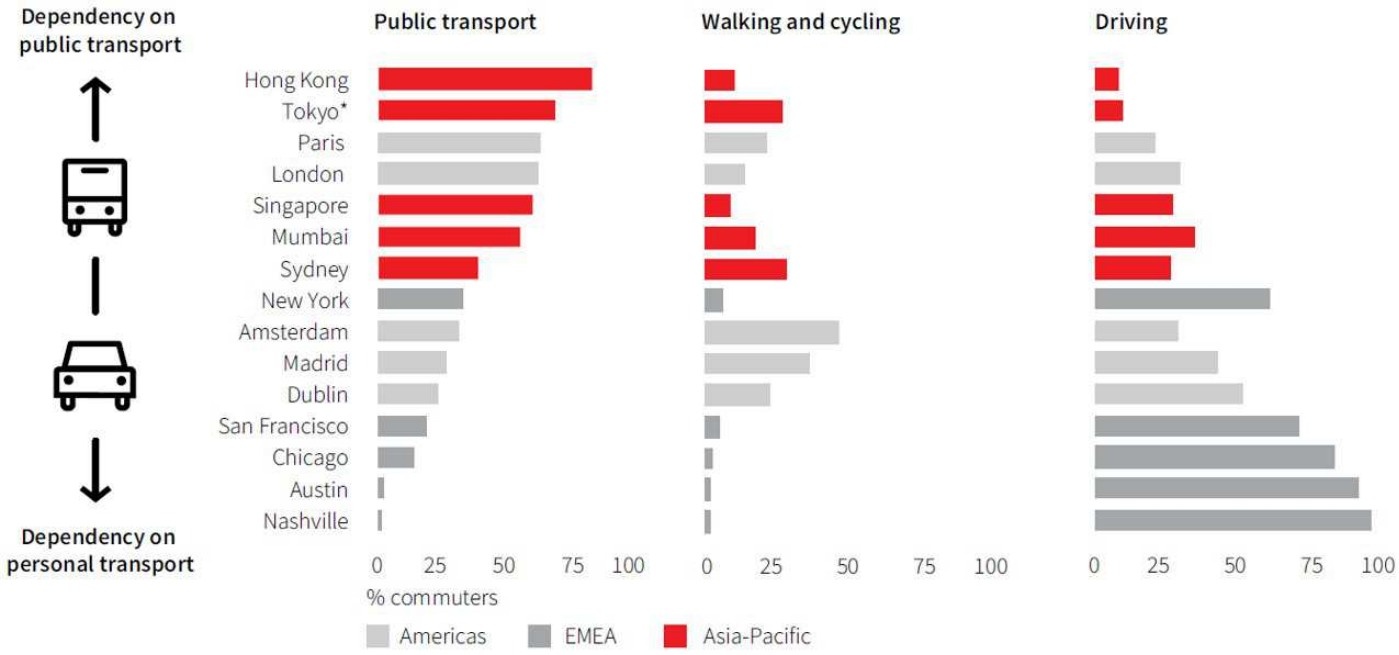
Source: JLL, Morgan Stanley Research

5. Commute redefined: 63% of respondents in our HK survey identified public transport as the reason they wanted to WFH. However, we think this is a temporary phenomenon and will go away as and when the COVID-19 situation improves.

Different ways to commute to work are an important factor in the feasibility of remote working/WFH. The higher the dependency on public transport, the greater the implications for returning to the office. Hong Kong and Tokyo have the highest dependency on public transport while Sydney and Mumbai in Asia are more dependent on personal transport such as driving or walking/cycling, according to JLL.

Exhibit 18:

Commuting methods across global cities



Source: JLL, Various national statistics offices

*Tokyo cycling data include motorcycles

Flexibility Is Still Valued

Demand for flex space in APAC could re-accelerate in the wake of the COVID-19 pandemic, as occupiers increasingly value flexibility in light of quickly changing business conditions.

More flex demand: We think demand for flexible space will grow across most markets in APAC over the next three years, as occupiers grapple with uncertainties around how much space they need to cater for remote working, expansion, and de-consolidation in the wake of the pandemic. This view is consistent across all the major Asian office markets covered by their respective Morgan Stanley analysts (see table below).

Increasingly, office landlords across APAC are incorporating flex space within their office buildings, either through leasing to third-party flex space operators or directly offering flex space themselves. This appears to match a structural trend of large enterprises moving from a traditional office leasing model to a core-plus-flex model, which allows for more nimble changes to office footprint in a fast-changing environment. Over the next three years, we expect leasing demand for flex space operators to grow in China, Japan, and Singapore, and landlords themselves to offer more flex space directly across most major Asian office markets (see table below).

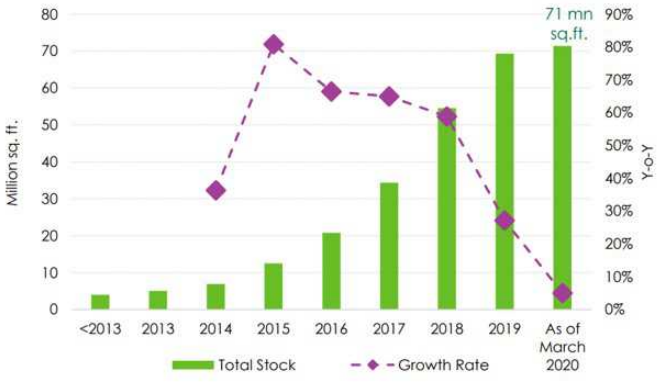
What is flex space? Flexible space, or flex space, refers to office work spaces that are typically fitted out, and offered by third-party operators – such as serviced office providers or co-working operators – who lease space from a landlord and sublet to tenants on shorter leases. This is unlike traditional office space, which is typically owned by a landlord and leased for at least 2-3 years to tenants, who are then responsible for their own fit-outs. Flexible space now comprises 4% of total Asia Pacific office stock, after a rapid threefold increase over the past five years, according to CBRE.

Morgan Stanley Property Analysts' views on flex space by market

Demand for flex space over the next three years?	AU	CH	JP	HK	IN	SG
More	X	X	X	X	X	X
About the same						
Less						
Net return of space						
Office landlords over the next three years?	**AU**	**CH**	**JP**	**HK**	**IN**	**SG**
Leasing to more flex space operators		X	X			X
Offering more flex space themselves	X	X	X	X		X
Not much change in strategy					X	

Exhibit 19:

Total size of flexible space market in Asia Pacific

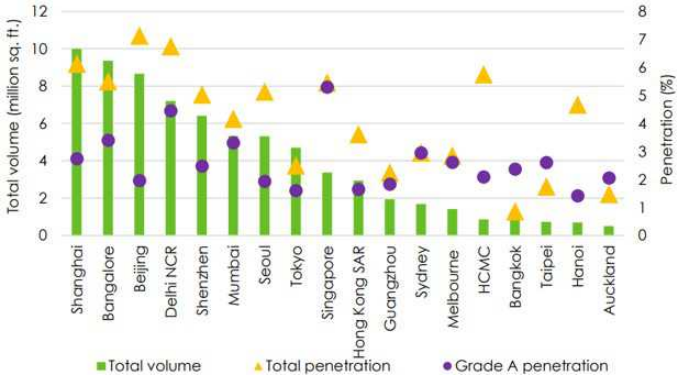


Source: CBRE Research, June 2020. Note: Agile space includes serviced offices and co-working space located in both office and non-office space. Incubators or accelerators are not included. Includes 18 Asia Pacific markets: Beijing, Shanghai,

Shenzhen, Guangzhou, Hong Kong, Taipei, Seoul, Tokyo, Singapore, HCMC, Hanoi, Bangkok, New Delhi, Bangalore, Mumbai, Sydney, Melbourne and Auckland.

Exhibit 20:

Penetration of flexible space industry by market



Source: CBRE Research, June 2020. Note: Agile space includes serviced offices and co-working space located in both office and non-office space. Incubators or accelerators are not included.

Why is demand higher because of COVID-19?

A majority of leading Asia Pacific landlords expect most buildings in their portfolios to have some kind of flexible office component in future, and this structural change is likely to accelerate in the COVID-19 era, according to CBRE. Despite a recent slowdown in growth (**Exhibit 19**), we agree that demand for flex space could re-accelerate in the next few years in the wake of the pandemic, for the following reasons.

Headcount volatility: Tougher business conditions amid a softer macroeconomic outlook have made it more difficult for companies to have certainty on their expansion plans and office needs. The evolving business environment, given travel restrictions and a shift to more remote working, further compounds this problem. Taking flex space may be a viable solution because the shorter leases and lower capex commitment mean that any decisions could be more easily reversed or changed to adapt to changing conditions.

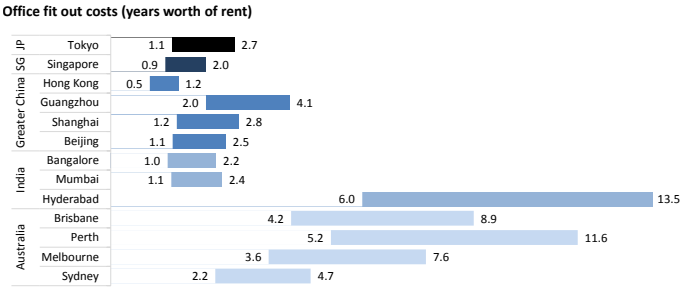
Avoiding fit-out costs: Office fit-out costs can be a substantial investment for relocating or expanding enterprises, in most markets costing at least a year's worth of rent (**Exhibit 21**). Taking flex space instead of traditional office space could help companies conserve capital amid an uncertain macro environment. The reduced commitment needed also offers more flexibility for future expansion or contraction, while avoiding having to bear the cost of reinstatement in the event of early termination.

De-densification: To comply with social distancing rules, companies may need more space as their workers return to the office, following the easing of lockdown measures across APAC. While the need for this space could be rather immediate, there is uncertainty around exactly how much space is needed for how long. Already fitted-out flex space, which offers the flexibility of shorter leases, could help address these concerns.

Business continuity planning (BCP): The pandemic has led some occupiers, who were originally considering consolidating staff into a single building to rethink their office real estate strategy, now instead to add secondary locations for Business Continuity Planning (BCP). This would not only help mitigate risks of having all staff in the same physical location in the event of a pandemic, but also support a greater diversity of workplace options for companies looking to incorporate more flexible work arrangements for their staff. Fully fitted flex space could offer a quick solution in the near term, while longer term, we think de-centralized office space could also benefit from an increased occupier focus on BCP.

Exhibit 21:

Fit-out costs can be equivalent to several years' worth of rents

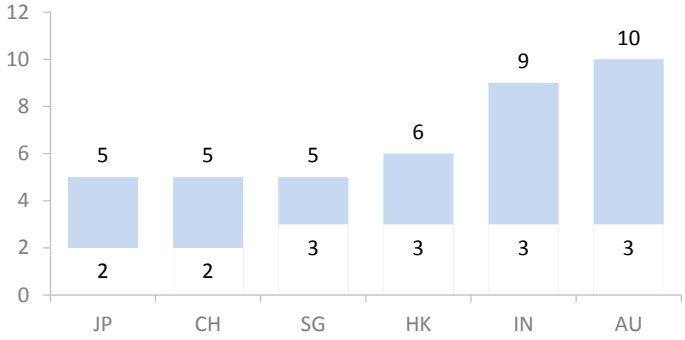


Source: CBRE Asia Pacific Fit-out Cost Guide 2019/2020 Edition, Morgan Stanley Research

Exhibit 22:

Traditional office leases start from two years

Typical office lease lengths in APAC (years)



Source: Colliers Asia Pacific Leasing Guide APAC 2017, Morgan Stanley Research

Hong Kong: Pricing in Too Much Downside?

Hong Kong office rental declined 5% in 2019 and 13% in 1H20. With stocks trading at a 65% discount to NAV, we estimate that they are discounting another 40% decline in office rental from current levels, which we think is unlikely. We believe overall office rents may fall only 20% from 2019 to 2022, hence only 7% from the current level.

Our preferred play is HK Land: It is trading at 0.35x P/BV and could benefit from a re-centralization theme.

We also have an OW rating on Swire Properties and SHKP.

We have also updated our latest view on HK office landlords. Please see Hong Kong Property: Office landlords: Pricing too much downside.

What is in the price? Key office stock proxies, HK Land and Swire Prop, are trading at discounts of 69% and 60% to NAV, respectively (hence average 0.35x NAV) in June 2020. This compares with 35% and 32% average discounts since 2011 (average 0.67x NAV).

In terms of dividend yield, HKL and Swire Prop are offering 5.6% and 4.7% FY1, respectively (average 5.2%), vs. 3.0% and 2.7% average yield, respectively, since 2011 (combined average of 2.85%).

The current stock valuations and dividend yield for HK office stocks are implying a 40-50% decline in rental. Benchmarking NAV [0.35/0.62-1] implies a 44% rent fall. Benchmarking dividend yield [(1/5.8%)/(1/2.85%)-1] implies a 50% fall in rent for the next 12 months (NTM).

We think this is too bearish vs. our base case forecast of a 7-12% rent decline from June 2020 to 2022 (or a 20-25% decline from 2019 to 2022e).

Overview in brief: We expect office rents to decline 25% in 2020 (1H20 has already declined 13% YTD, according to JLL) but then recover somewhat, 2.5% p.a. in 2021 and 2022. Overall, we see 2022e HK Grade A office rents being around 20-25% lower in 2020 than the 2019 level.

Historically, HK office rent correlated well with the two-year CAGR in HK GDP. HK office rents had a long down-cycle during 1994-2003, when office rents declined 70% from the peak. During those nine years, HK's nominal GDP two-year CAGR decelerated from +16% in 1994 to 0% in 2003. Our HK economist, Jenny Zheng, forecasts the HK nominal GDP two-year CAGR to decline from +5% in 2019 to a trough of -2% YoY in 4Q20. She expects nominal GDP growth to recover to +7.5% in 2021 and +5.4% in 2022, implying a two-year GDP CAGR of 6.4% by 2022.

Our base case rent assumption is only mildly affected by WFH arrangements. We estimate the net WFH impact to be around 3% of office demand over five years, hence 0.6% p.a. Our assumption is based on our proprietary AlphaWise survey of 689 white-collar workers in Hong Kong from July 20-23, 2020. We also reference office tenant industry exposure and Hong Kong office worker occupations.

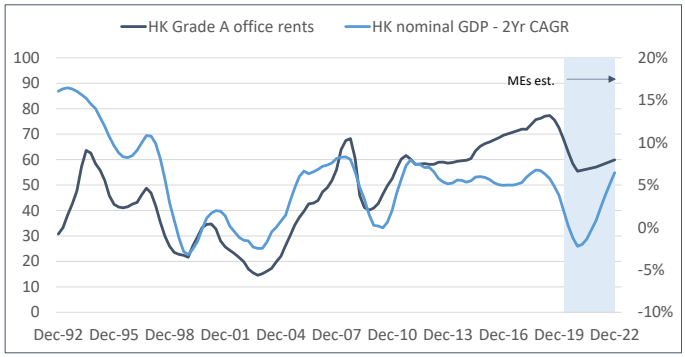
Some of the tenants will return space to landlords and experiment with desk sharing and outsourcing. However, we believe broad-based WFH will be difficult to implement in Hong Kong in view of:

- Workers' smaller residential apartments,
- Hong Kong's convenient transport network, and
- Employees' preference to work in the office for collaborative/face-to-face interaction.

On top of this, office density in Hong Kong is one of the highest in the world, which could mean additional space is needed to enable social distancing.

Exhibit 23:

HK Grade A office rents vs. HK nominal GDP growth two-year CAGR



Source: JLL, Census & Stat Dept, CEIC, Morgan Stanley Research estimates

(1) Sizing the market

Office stock in Hong Kong: Hong Kong had 99mn sq. ft. of Grade A office stock as of 2019, with a vacancy rate of 7.0%. Excluding Kowloon East and non-core areas, core areas (Central, Wanchai, Tsim Sha Tsui and Island East) have a blended average vacancy rate of 5.7%.

Assuming HK$27K psf value (US$3.5K psf), we estimate the total office stock is worth US$345bn (HK$2.7tr).

Three companies – SHKP, HK Land, and Swire Properties – are the key players, with combined market cap of US$60bn moving with the office outlook.

(2) Demand drivers and supply outlook

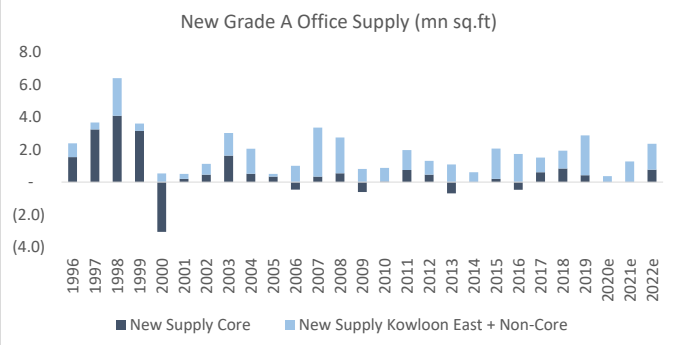
Including demolition, the city adds 1.5mn sq.ft of net property additions every year on average, representing 1.6% CAGR during 2009-2019. Average new supply during 2014-2019 was 2.1% p.a. We estimate 2020-22 new supply to be 1.3% p.a. We highlight that most of the new supply would likely come from Kowloon East and non-core areas. Supply at core areas (Central, Wanchai, TST and Island East) would be limited. We estimate that core area supply will grow 0.4% p.a. during 2019-24, while supply in Kowloon East and non-core will grow 2.7% p.a.

Office take-up is related to real GDP: We found a strong positive correlation (R-squared=98%) between HK's real GDP and Grade A office occupied stock, where occupied stock equals total stock less vacancy. Our Hong Kong economist, Jenny Zheng, forecasts HK real GDP to decline 7% in 2020 and recover to +5% in 2021E and 2.5% in 2022E. Under our historical regression analysis, office vacancy could be 8-9% in 2020-22E, on lower GDP but rising supply. However, we notice that during previous "V-shaped" economic cycles – i.e., 1999 and 2009 – the regression model overestimated office vacancy by around 1.5ppt to 2.0ppt.

If we assume 0.6% p.a. office space is returned because of WFH, we expect office vacancy to reach 8-9% in 2020-22E.

Exhibit 24:

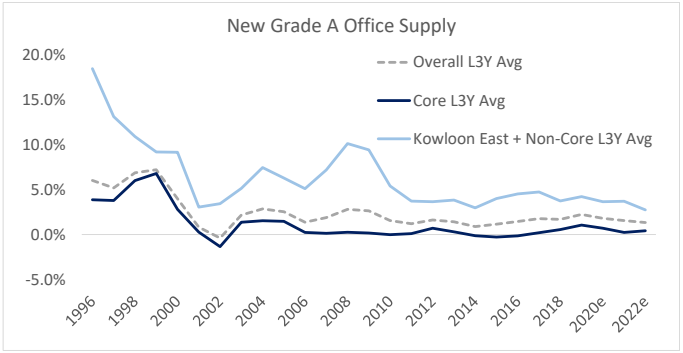
Grade A office supply since 1996



Source: JLL, Morgan Stanley Research estimates; Core represents Central, Wanchai, TST and Island East

Exhibit 25:

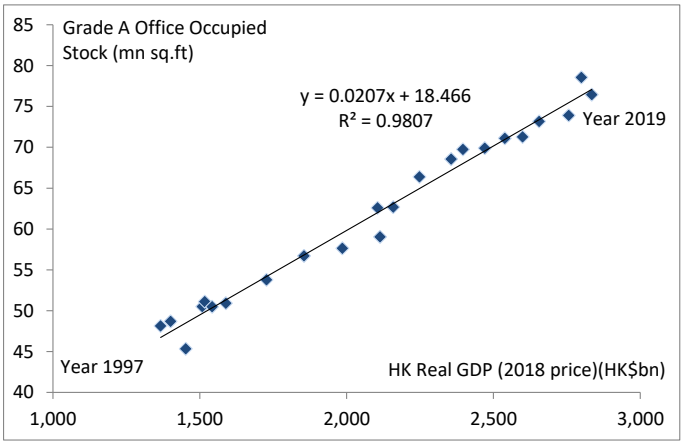
Grade A office supply – last three years average %



Source: JLL, Morgan Stanley Research estimates; Core represents Central, Wanchai, TST and Island East

Exhibit 26:

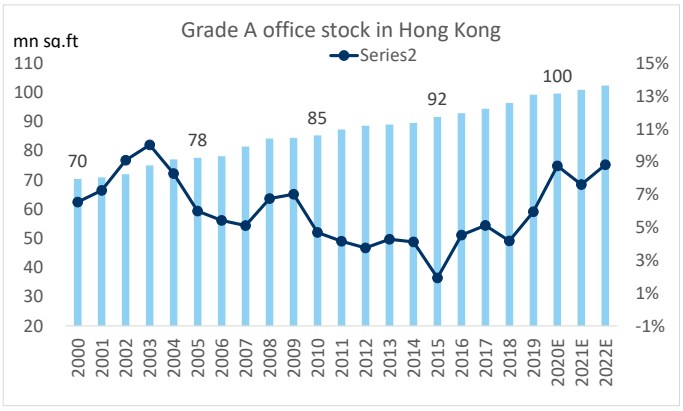
Grade A office occupied stock has a linear relationship with real GDP



Source: R&V, C&S, CEIC, Morgan Stanley

Exhibit 27:

HK Grade A office stock and vacancy rate



Source: JLL, Census & Stat Dept, Morgan Stanley Research estimates

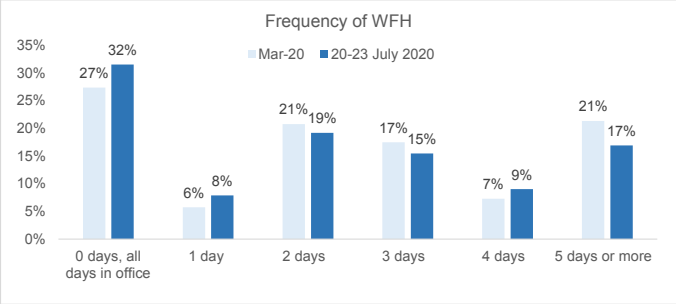
(4) AlphaWise survey on WFH

We surveyed 689 white-collar workers in Hong Kong from July 20-23, 2020 to understand their WFH situation. Key findings included:

- 73% of surveyed respondents WFH during COVID-19 with 68% of the respondents still working from home, slightly lower than during last COVID-19 surge in March.
- 64% of respondents prefer to WFH partially. Only 19% of respondents said they would like to WFH every day of the week after COVID-19. At the same time, 17% of respondents said they did not want to WFH at all in future.
- 53% of respondents said they would be uncomfortable using a shared desk.
- 48% of respondents believed that their employer would not allow WFH in future.
- 57% of respondents said infrastructure constraints were the key challenge of WFH. 40% said that WFH affected their efficiency; 33% said that WFH makes collaboration/teamwork difficult. Only 25% of respondents said space constraints were among the top three WFH challenges.

Exhibit 28:

HK WFH survey – frequency of WFH in Mar-20 and Jul-20

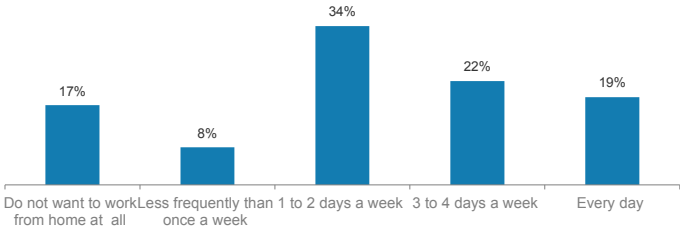


Source: AlphaWise, Morgan Stanley Research

Exhibit 29:

HK WHF survey – likelihood of WFH in future

How often would you like to work from home in the future (post-Covid)?

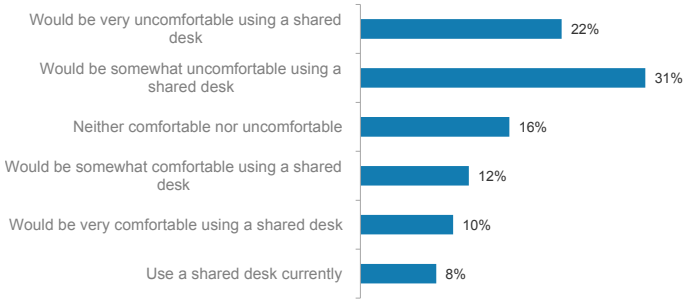


Source: AlphaWise, Morgan Stanley Research

Exhibit 30:

HK WFH survey – level of comfort with hot-desking

Level of Comfort with Hot-Desking

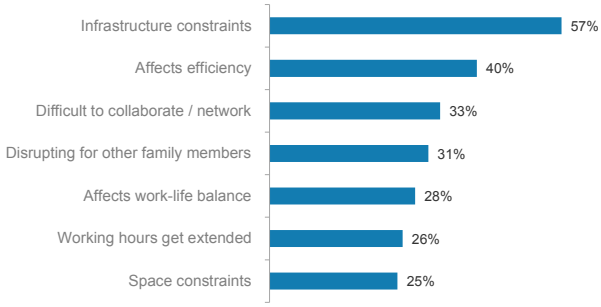


Source: AlphaWise, Morgan Stanley Research

Exhibit 31:

HK WHF survey – key challenges of WFH

Key Challenges while WFH



Source: AlphaWise, Morgan Stanley Research

(5) Demand drivers – tenant mix

Net impact (3% of demand over five years): We arrive at this conclusion by multiplying the percentage of employers implementing WFH (33%) with the percentage of time working from home (one day per week = 1/5 = 20%) and percentage of employees in favor of desk sharing (50% of respondents). All three numbers are arrived at by using our recent AlphaWise survey done between July 20 and July 23, 2020. Grade A office leases normally range from 3-5 years, but some large tenant leases could be 6-10 years. This means average occupancy impact could be -0.6% p.a. (-3% over five years).

Work from home = 7% less demand for office space: We consider three major factors:

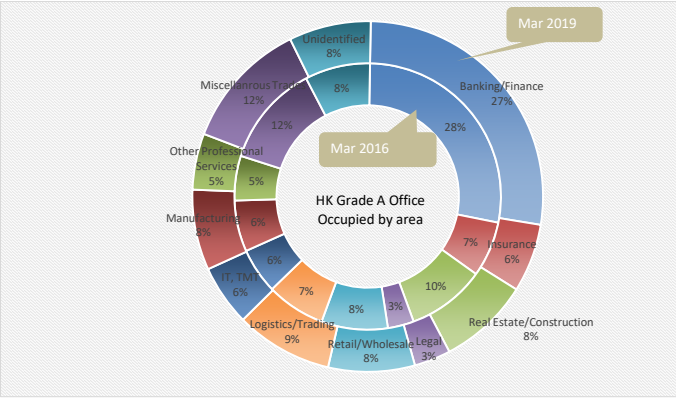
- **AlphaWise survey:** Evidence suggests that most employees prefer a hybrid approach, and WFH for 1-2 days a week (i.e., around 20% of the time) is most preferred. One-third of respondents believed their employer will implement WFH in future. This means around a 7% [=20%*33%] reduction in office space demand.
- **Office occupier industry:** 47% of Grade A office occupiers belong to industries that we think are more able to adapt to the WFH environment. They include banking/finance, insurance, legal, IT/TMT, and other professional services. Assuming 20% of them choose to WHF (i.e., around one day a week), that translates to ~10% less office demand. Of interest, in the July 2020 survey done by JLL (property agency and consulting firm), only US banks have adopted higher levels of WFH arrangements. Other companies in Hong Kong are mostly working from the office.
- **Office workers occupation**: The government categorizes HK employment by (a) managers and administrators, (b) professionals, (c) associate professionals, (d) clerical support workers, (e) service and sales workers, (f) craft and related workers, (g) plant and machine operators and assemblers, (h) elementary occupation, and (i) others. Assuming 10% of managers & administrators, 20% of professionals, 5% of associate professionals and 0% of clerks WFH, that translates to 7% less office demand.

Social distancing = 4% increase in demand for office space:

- According to our AlphaWise survey, 50% of HK white-collar workers do not prefer a shared-desk environment. Employers will need to strike a balance between employees' efficiency/satisfaction vs. space cuts for WFH.
- In its June report on the global workplace, Cushman and Wakefield, a global property consultancy firm, suggest that firms could increase their floor space 15-20% in the new normal after COVID-19 in view of social distancing and the desire for collaborative working environments. Assuming a quarter of all companies expand their workspaces to provide a "safer" and more "employee-friendly" working environment, this translates to a 4% demand increase.

Exhibit 32:

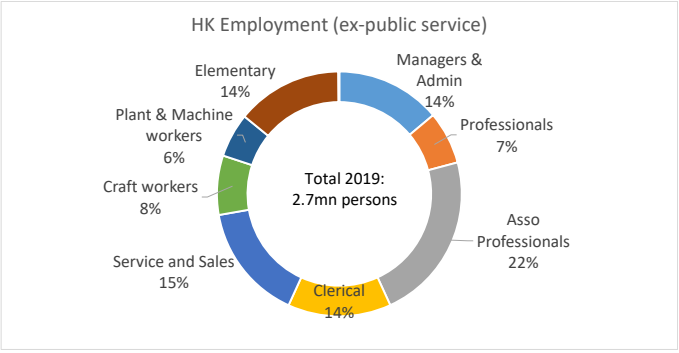
HK Grade A office occupied trade-mix



Source: CBRE as of March-2019

Exhibit 33:

HK employment by occupation (2019)



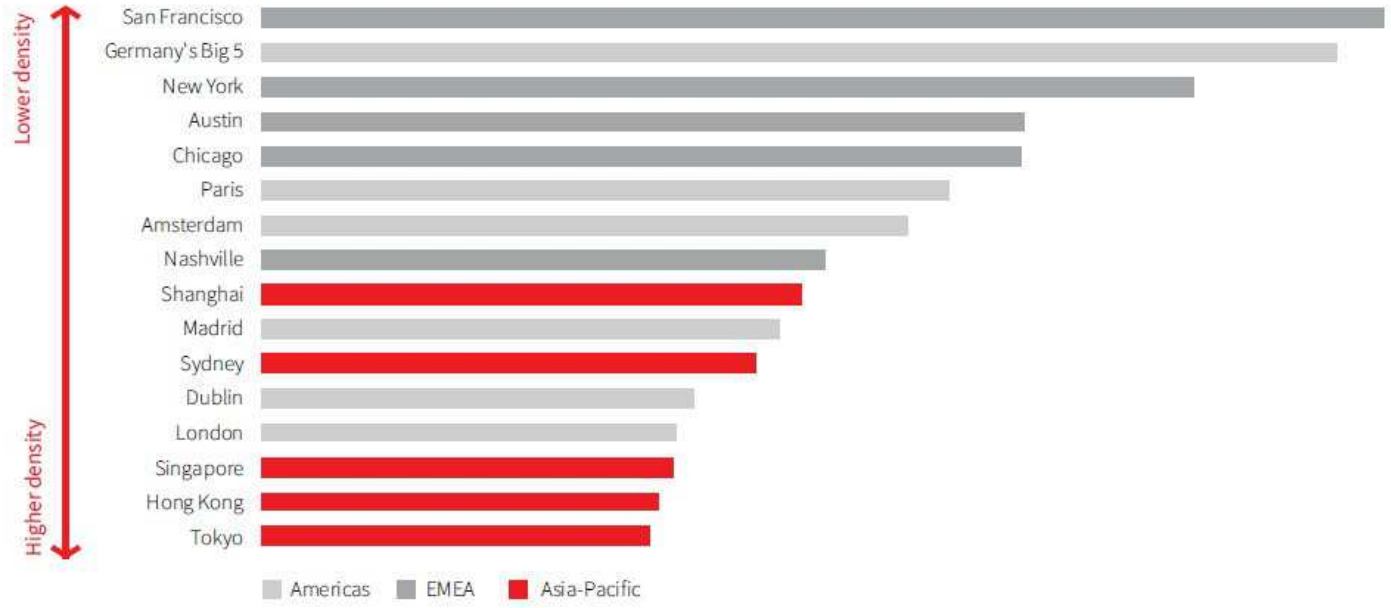
Source: Census & Stat Dept, Morgan Stanley Research

Unique characteristics of Hong Kong that may keep the WFH percentage low:

- **HK residential units are much smaller than in the rest of the world:** We estimate the average residential unit size in Hong Kong is around 450 sq.ft. Assuming 2.8 persons/household, the per capita living space is around 160 sq.ft. This makes it difficult for HK workers to WFH but maintain a similar level of workplace efficiency. Comparatively, the average living space per capita in Singapore is around 320 sq.ft and that in the US is around 800 sq.ft., we estimate.
- **Office density is already extremely high:** Per JLL, average workspace per office worker in Hong Kong is around 100 sq.ft, making it the country with the second-highest density, globally). As a result, it would be a challenge for employers to cut significant office space only to find out that WFH arrangements do not work out as planned.
- **Transport network is convenient:** HK has a convenient public transportation network; hence, commuting times are shorter than in other major cities around the world. Per a survey run by journey-planner app, Moovit, in 2016, average commuting time for HK workers was around 73 minutes (return trip), less than New York (at 87 minutes), Singapore (84 minutes) and London (84 minutes).

Exhibit 34:

Global O]office density



Source: JLL, June 2020

*U.S. data is a calculation based on occupied stock and office employment

Source: JLL - The future of global office demand, Jun 2020.

(6) HK office rental outlook

Base case – rent to drop 7% from June 2020 to 2022E: We see the net impact of WFH, social distancing, and the resulting economic slowdown potentially creating 8-9% of vacancy by 2022E. This could imply that market rents decline 20% from 2019 to 2022e. But, given overall office rents have fallen 13% in 1H20, this means rental downside from WFH and the upcoming economy volatility will be 7%, over the next three years, by our estimates.

Office rent is a function of supply and demand and has a high correlation with real GDP growth. As vacancy rises, rents fall but the correlation breaks down when rent reaches a certain level.

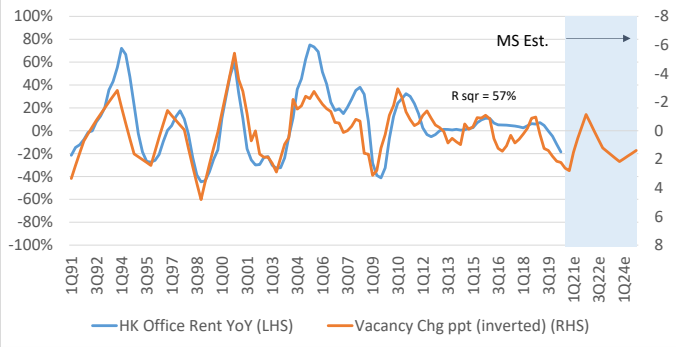
Overall, rent growth YoY is positively related to vacancy. Cyclically, rent growth is also correlated with real GDP growth. Taking into consideration GDP growth and increasing office supply but a slight negative impact from WFH in HK, we estimate that overall Grade A office rent will fall 25% in 2020 (in response to weak GDP and sluggish demand). The V-shaped GDP recovery that our Hong Kong economist expects and muted new supply support +2.5% p.a. rent growth in 2021-22.

Vacancy up from 7% in 2019 to 8-9% in 2022: This is mainly driven by a sharp fall in GDP in 2020 followed by a rebound in 2021/22. We estimate upcoming new office supply growth at around 2.1% p.a. over 2019-24e. We assume a mild increase in net vacancy as a result of WHF, social distancing and flexible workspace arrangements.

We are more conservative than the market: Key property consulting & agency firms expect HK office rents to decline 15-25% YoY in 2020. Our forecast is at the bearish end of market estimates. Nonetheless, such bearish assumptions are still tracking above what stock prices are implying (to be explained below).

Exhibit 35:

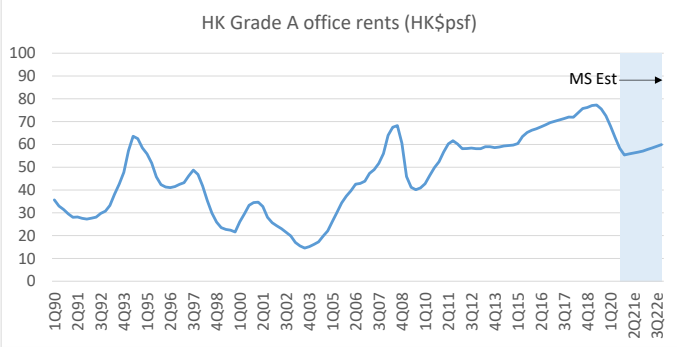
HK office rent YoY vs. change in office vacancy



Source: JLL, Morgan Stanley research estimates

Exhibit 36:

HK office rents



Source: JLL, Morgan Stanley Research (e) estimates

(7) Bull/bear spread

Bull case – rent to grow 20% from June 2020 to 2022: We assume office rents grow 20% from June 2020 as rents have fallen ~13% in 1H20. In this scenario, we assume HK nominal GDP declines 5.5% in 2020, but grows 7% in 2021 and 3.5% in 2022. WFH has no impact on office demand. In this scenario, overall HK office vacancy improves mildly from 7.6% in June 2020 to 6.5% in 2022.

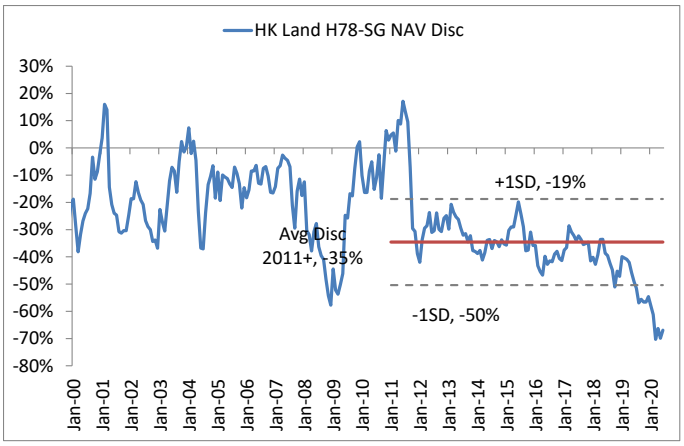
Bear case – rent to fall 30% from June 2020 to 2022: In our bear case, we assume office rents fall a further 30% from their June 2020 level (already down ~13% in from Dec-19 to Jun-20). Overall office rents fall back to 2009 levels at HK$40psf and Central rent to HK$67psf. In this scenario, we assume HK GDP declines 9.5% in 2020 and recovers to just 1% growth in 2021 and 2022. WFH reduces office demand by 2% p.a. In this scenario, overall HK office vacancy reaches 15% by 2022. One interesting trend we observe is that rent tends to bottom out at a level where it may not decline significantly further despite increases in vacancy rate. For example, Kowloon East office rents declined only 3% in 2019 despite vacancy increasing from 9.6% in December 2018 to 13.1% in December 2019.

(8) What's in the price and stock ideas

Market is overly bearish about rent declines: Key office stock proxies, HK Land and Swire Properties, are trading at 69% and 60% discounts to NAV, respectively, as of June 2020. This compares with average discounts of 35% and 32%, respectively, since 2011. In terms of dividend yield, HKL and Swire Properties are trading at 5.6% and 4.7% FY1 dividend yields, vs. 3% and 2.7% average yield since 2011. We believe the current stock prices imply that the market expects HK office rents to fall 40% from the June 2020 level in the next three years, which is overly bearish compared to our expectation of a 12% decline.

Exhibit 37:

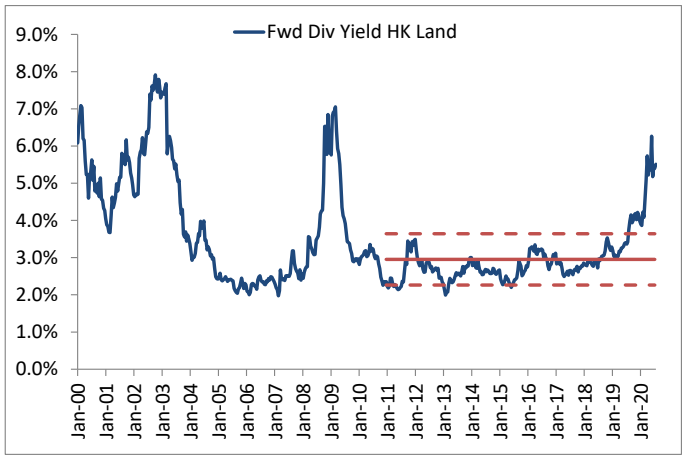
HKL discount to NAV



Source: Refinitiv, Morgan Stanley Research

Exhibit 38:

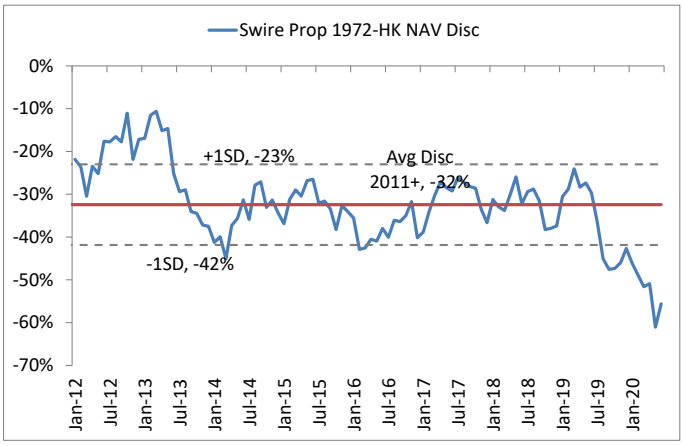
HKL dividend yield



Source: Refinitiv, Morgan Stanley Research

Exhibit 39:

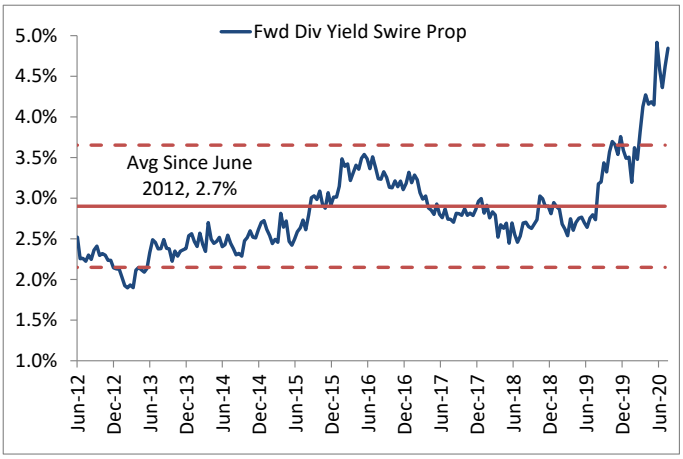
Swire Prop discount to NAV



Source: Refinitiv, Morgan Stanley Research

Exhibit 40:

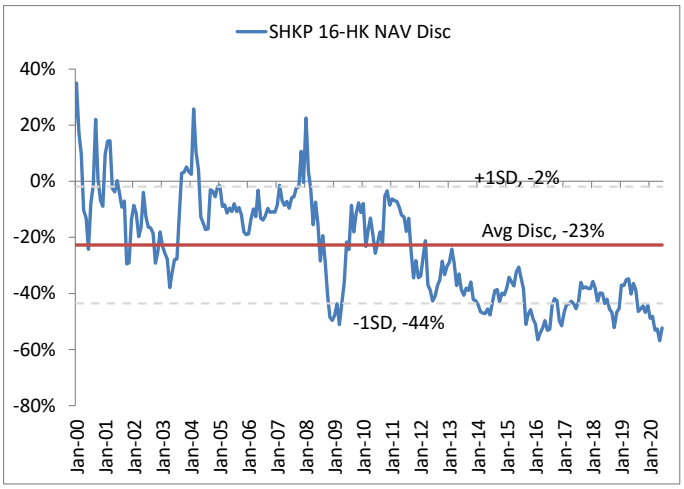
Swire Prop dividend yield



Source: Refinitiv, Morgan Stanley Research

Exhibit 41:

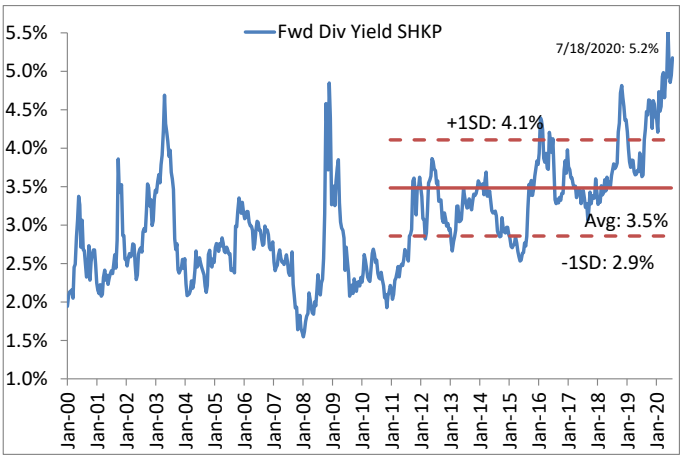
SHKP discount to NAV



Source: Refinitiv, Morgan Stanley Research

Exhibit 42:

SHKP dividend yield



Source: Refinitiv, Morgan Stanley Research

Singapore: Concerns Appear Overdone

We think market concerns over structural headwinds to office demand as a result of employees WFH may be overdone, given the offsetting effects of de-densification and supply removals.

In Singapore, we prefer Keppel REIT.

Our least preferred stock is Suntec REIT.

Rents to fall 10% over three years: We forecast Grade A office spot rents decline 15% in 2020-21, before rising 5% in 2022. We think the net 10% decline in rent over three years will be underpinned by island-wide vacancies increasing from 10.5% to 12.5% through this period, as demand trails a below-trend net supply outlook. After factoring in stock removals for redevelopment, we estimate total office stock grows just 2% over three years, but on the demand side, we expect zero net absorption as occupiers return space in 2020 amid a likely economic recession. In our bull case, we think office rents can grow 15% in 2020-23, and in our bear case we see a decline of 30%.

WFH = 10% less demand... In our base case, we assume that office occupiers try to reduce their footprint 10% over five years (2% p.a., so 6% in total by 2022) to accommodate a larger proportion of staff working remotely. Singapore's office worker population want to spend 28% less time working from office premises, according to the survey undertaken by Engagerocket.co in June 2020, Pulse of Singapore Workforce (**Exhibit 46**). But we think the space reduction by employers will be less than that after considering the feasibility of migrating certain roles outside the office, the economics of keeping vs. undoing fit-outs, and difficulties in reducing space for amenities and shared facilities.

...but offset by de-densification: At least in the near term, we believe the need for more space to ease office density could be enough to fully offset the reduction in demand as more office workers work from home. We see a reversal in rising office densities as occupiers may need 15-20% more space for social distancing, according to property consultant Cushman and Wakefield, and assume 6% more space is needed by 2022, negating the impact of WFH. Beyond that, however, de-densified office layouts may not persist as a structural trend in the same way that WFH will, in our view. As we near the development of a vaccine and the pandemic is eventually resolved, occupiers could once again return to higher office densities to maximize cost efficiency.

Flex space to benefit from uncertainty: As office occupiers grapple with uncertainties around the macroeconomic outlook and spatial needs to accommodate safe distancing vs. more remote working, we think companies will shift more of their office footprint into flex space. Flex space, typically offered by co-working operators, gives tenants the flexibility of short leases while bypassing the need for them to invest in costly fit-outs. This could be a quick solution to companies needing to adhere to social distancing rules in the near term, whilst still lacking visibility on longer-term plans for remote working, expansion, and de-consolidation. Co-working operators comprise roughly 5% of Singapore's office stock, and we see scope for this segment to grow their private office offering to cater to demand for flex space.

Singapore office REITs: We think valuations of the three largest Singapore office REITs – CapitaLand Commercial Trust (CCT), Suntec REIT (SUN), and Keppel REIT (KREIT) – are pricing in a 10-20% drop in office rents. At these levels – particularly for our preferred office REIT, KREIT – we think that market concerns over structural headwinds due to the WFH trend seem overdone.

(1) Sizing the market

Market size – US$160bn: We estimate Singapore's 87mn sq. ft. of office buildings have a market value of S$229bn, or US$160bn as of 31 March 2020, with half the value coming from those located in the core CBD. This excludes some 24mn sq. ft. of business parks, which we estimate is worth US$10bn.

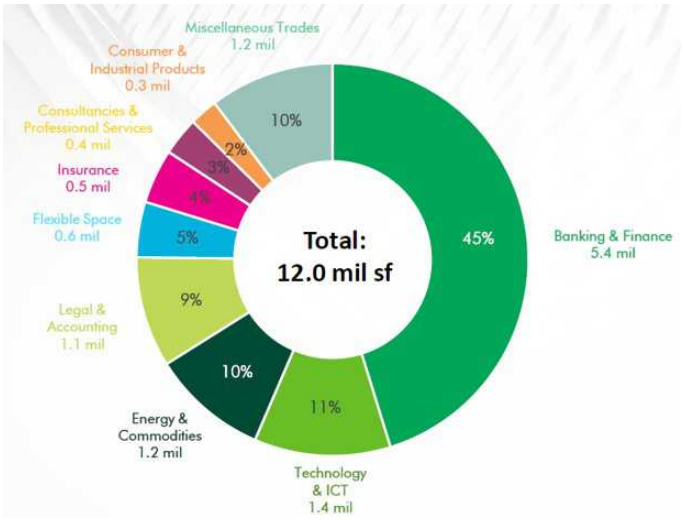
(2) Demand drivers

(a) Tenant mix

The bulk of Grade A office stock in Singapore is taken by banking & finance firms, which made up 45% of total occupancy in 2018 (**Exhibit 43**). Recent years have seen technology firms o\in aggregate increasing their office footprint in Singapore, such as Microsoft (125,000 sq. ft. in Frasers Tower in 2018), Grab (80,000 sq. ft. in Marina One in 2018), and Facebook (320,000 sq. ft. in Marina One in 2018). Flexible space operators have been growing as well, taking up 5% of Grade A office stock as of June 2020 (**Exhibit 44**).

Exhibit 43:

Singapore Grade A Office Occupier Profile



Source: CBRE Research. Note: Data collated as at Q4 2018. Total sample size was 12.0mn sq. ft. (accounting for 84% of total Grade A Core CBD Stock). Miscellaneous Trades include real estate, transport & storage, government, construction, engineering, etc.

(b) Other demand drivers – WFH, recession, de-densification

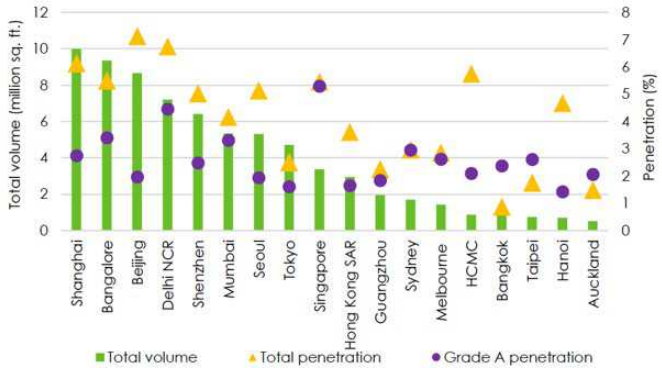
In determining our outlook for the Singapore office market , we have taken into account several key factors that we think will drive demand through 2022:

1. WFH trend to drive a 6% reduction in office space;
2. De-densification to fully offset this with a 6% increase in space requirements; and
3. Recessionary environment to entirely negate a 3% (1% p.a.) increase in demand, which would have been an otherwise normal run rate under pre-COVID conditions.

We overlaid our demand outlook with the known supply pipeline, after factoring in elevated levels of stock removals as developers capitalize on initiatives introduced last year to incentivize redevelopment and urban renewal.

Exhibit 44:

Penetration of flexible space industry by market

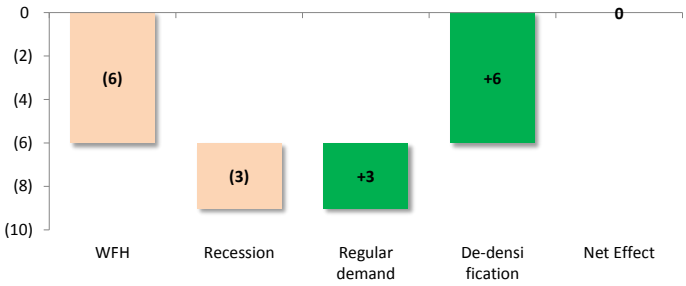


Source: CBRE Research, June 2020 Note: Agile space includes serviced offices and co-working space located in both office and non-office space. Incubators or accelerators are not included.

Exhibit 45:

WFH and macro headwinds to offset net absorption from expansion and de-densification

Office net absorption, 2020-22 (% of stock)



Source: Morgan Stanley Research estimates.

WFH (-6%): Singapore office workers spent 47% of their time working outside office premises in 2018, but would like to spend 62% of their time working remotely as of June 2020 (**Exhibit 46**), based on surveys conducted by IWG and Engagerocket.co. This suggests that office workers in aggregate would be satisfied spending 28% less time in the office (28% = [1-62%]/[1-47%]-1).

Assuming roughly half of office space comprises desks and individual work spaces, office occupiers could reduce their footprint around 15%, we estimate. Considering pre-termination costs and lease lengths, which typically range from three years for smaller tenants to 10 years for larger anchors, we think recalibrating office requirements to the new norm could take five years. The space reduction of 15% over five years (3% p.a.) forms the basis of our bear case, whereby the preferences of office worker populations are fully met.

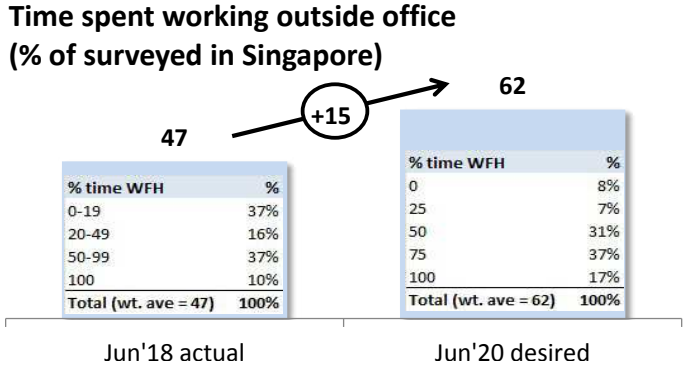
Realistically, we think not all jobs functions can be easily or fully migrated out of office, reflecting issues of security, infrastructure, and culture. We formulate our base case on the assumption that two-thirds of workers are satisfied, implying a space reduction of 10% over five years (2% p.a.).

Especially for firms that have recently invested in fit-outs, which typically cost more than a year's worth of rent, the cost of undoing renovations to reinstate leased space for return to the landlord may not be the most economical approach.

Our bull case embeds the potential for even more difficulties in enabling remote working, and also takes into consideration the office location as a means for companies to attract and retain talent. Here, we factor in space reduction of 5% over five years, or 1% p.a. (**Exhibit 47**).

Exhibit 46:

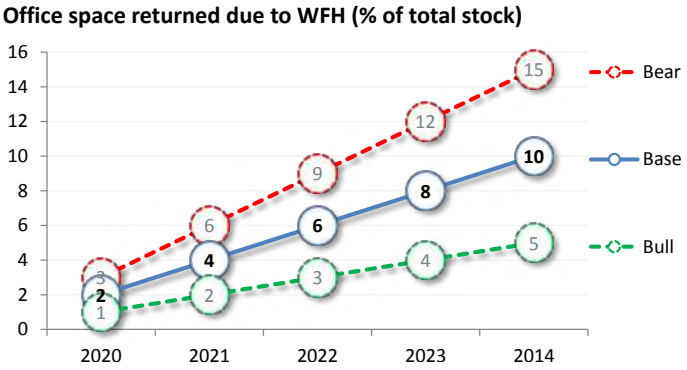
Singapore's workforce wants to spend more time working remotely



Source: IWG Global Workspace Survey (2018), Engagerocket.co's Pulse of Singapore Workforce (Jun 2020), Morgan Stanley Research

Exhibit 47:

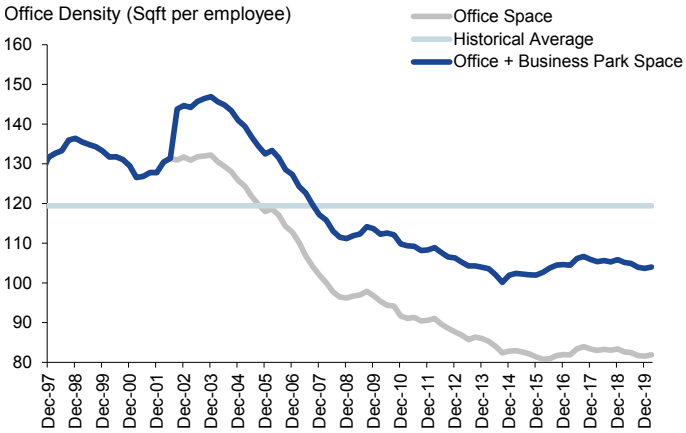
We estimate 10% of Singapore office space could be returned over five years to accommodate remote working



Source: Morgan Stanley Research estimates

Exhibit 48:

Singapore office space per worker has fallen



Source: CEIC, URA, JTC, Morgan Stanley Research. Note: Office and Business Park space calculated as total available stock. Number of employees estimated based on assumptions laid out in Asia Property Investors : Core Cities in Contrast – HK vs. SG Office (May 5, 2014).

De-densification (+6%): Office densities have risen over the past two decades as occupiers fit more workers per unit of space in a bid to optimize space utilization and maximize cost efficiency. We estimate the average office (including business park) space per worker has fallen from 150 sq. ft. in 2003 to 100 sq. ft. currently (**Exhibit 48**), with newer offices offering more efficient layouts with as little as 70-80 sq. ft. per worker.

We expect this trend to reverse as occupiers de-densify their offices, at the very least to comply with social distancing rules – currently set at 1 metre between workstations and seats in common areas in Singapore. Property consultant Cushman and Wakefield (in its May 2020 report 'The Future of Workplace') suggested companies may need 15-20% more space to accommodate social distancing, which could be enough to offset smaller workspace needs due to increased flexible working practices – resulting in no net change in footprint.

We have applied a similar assumption in our base case forecasts – that office space reduction due to WFH is fully offset by additional space needs to accomplish de-densification from now to 2022. Beyond that, assuming the COVID-19 pandemic has been resolved, the persistence of de-densified office spaces will ultimately depend on how occupiers balance the cost saving benefits of higher office densities with employee well-being and managing the risks of a future pandemic.

Recession (-3%): Net absorption, or net change in occupied office space, fell below zero during the periods of recession in 1998, 2002, and 2009. As Singapore goes through its deepest ever economic recession in 2020, we see net absorption falling to negative 1mn sq. ft., as occupiers hold back on expansions. This in line with the -1mn sq. ft. in net absorption seen during 2002 and 2003 – not worse, since we think some businesses may allocate a larger proportion of their physical footprint in Singapore relative to other regions given its political and policy stability.

We forecast that net absorption gradually improves to 0 in 2021 and +1mn sq. ft. in 2022 as the economy recovers, bringing the total 2020-22 net absorption to 0. Extrapolating the average annual net absorption of 1mn sq. ft. in the past five years, 2020-22 net absorption could have been 3mn sq. ft., or 3% of office stock if not for the recession, we estimate.

Supply removals: 1mn, 1.2mn, and 2.0mn sq. ft. of office space are due to be completed in 2020, 2021, and 2022, respectively, adding an average of 1.5% p.a. to total stock. However, after factoring in stock removals from buildings due for redevelopment, we estimate the net supply outlook falls to nearly zero in 2020 and 2021. We have assumed that Keppel Towers (0.4mn sq. ft.), Tower 15 (0.2mn sq. ft.), and Shaw Towers (0.3mn sq. ft.) are taken out in 2020, and Fuji Xerox (0.4mn sq. ft.), Manulife Centre (0.2mn sq. ft.) and AXA Tower (0.7mn sq. ft.) are taken out in 2021. The muted supply outlook we think will help cushion the impact on rents from subdued demand.

(3) Singapore office rent and vacancy outlook

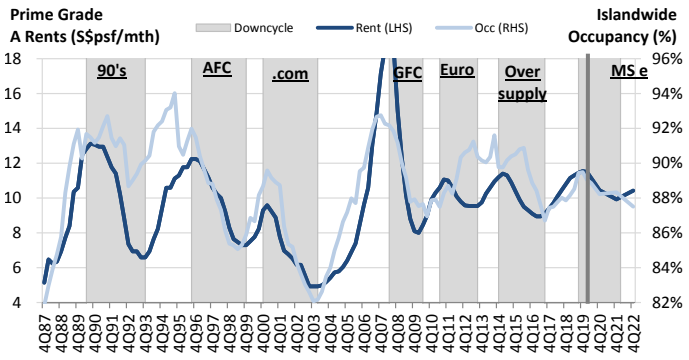
Rents -10%: We forecast rents for Grade A office spot decline 10% in 2020 (previous forecast: -2%), fall another 5% in 2021, before rising 5% in 2022. This implies a 10% decline over three years for a CAGR of -3%. Rents had risen nearly 30% over 10 quarters before falling in 1Q20, and we think the ongoing decline will last for two years, in line with the 2-3 year length of previous downcycles over the past two decades.

Vacancies rise from 10.5% to 12.5%: Island-wide vacancies ended 2019 at 10.5%, and we expect vacancies to widen to 12.5% through 2022. While we estimate there are virtually no net additions to office stock in 2020 and 2021 due to stock removals for redevelopment, we think low supply will be met by low demand as a soft macro environment and downsizing activity weighs on the net absorption of space. Guoco Midtown and Central Boulevard Towers could inject significant supply into the market when they are completed in 2022, which we think could cause vacancies to widen further. Rents, however, could start picking up by then as these buildings raise rents after securing anchor tenants.

Cap values -5%: Given a lower for longer interest rate environment and still healthy demand for core assets from private equity funds, we think cap rates and cap values will largely hold firm, falling just 5% through 2022.

Exhibit 49:

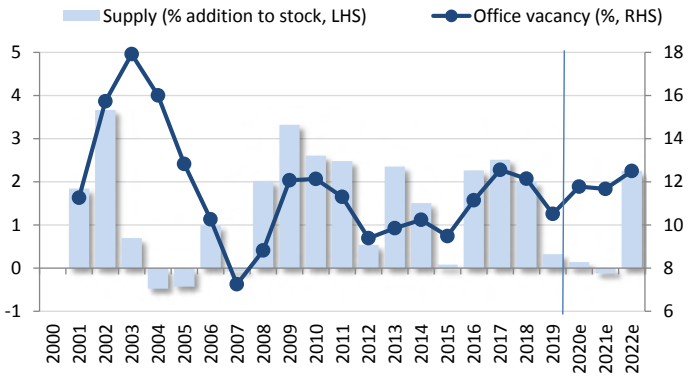
Singapore office rents have entered a two-year down-cycle



Source: CBRE, URA, Morgan Stanley Research (e) estimates.

Exhibit 50:

Singapore office vacancies to edge up despite low supply



Source: CBRE, URA, Morgan Stanley Research (e) estimates

(4) Office rental – bull/bear spread

Bull case – rents +15%: In our bull case scenario, we factor in 1% of office space being returned each year (base case: 2%) by office occupiers to accommodate more remote working, and estimate island-wide vacancies tighten to 9% by 2022. The growing scarcity of office space leads office rents to quickly resume a growth trajectory, ending 2022 at S$13psf, 15% above 2019 levels, for a three-year CAGR of 5%.

Even in our bull case, we do not expect rents to return to 2008 peak levels of above S$18psf, as we believe policy makers will step in to recalibrate supply to avoid business costs escalating to levels that would be uncompetitive and deter corporate expansions into Singapore.

Bear case – rents -30%. In our bear case scenario, we factor in 3% of office space being returned each year (base case: 2%) by office occupiers to accommodate more remote working, and estimate island-wide vacancies widen to 16% by 2022, near the record 18% level seen in 1987 and 2003. The excess space leads to office rents being cut 30% over three years (2019-2022), broadly in line with the past three downcycles, which showed an average decline of 31%.

Even in our bear case, we do not expect rents to return to 2003 trough levels of below S$5psf, sincewe believe such a sharp decline would trigger an acceleration of stock removals for redevelopment. With incentives introduced for redevelopment and urban renewal introduced last year, office building owners may opt to redevelop the buildings they struggle to fill rather than slash rents. Furthermore, as the premium over business park rents narrows, cost-driven relocations from offices to business parks could reverse and stem the fall in office rents.

	Bear	Base	Bull
Rents, 2019-22e	-30%	-10%	+15%
Vacancy, 2022e	16%	12.5%	9%

(5) What's in the price and stock picks

Singapore office REITs pricing in 10-20% rent declines: We compare trading P/B multiples of Singapore's largest office landlords (also within our coverage) against a group comprising the top 10 S-REITs. The resulting discounts for KREIT, CCT and SUN imply market expectations of a 10-20% decline in Grade A office rents, but we argue that this has been negatively skewed by expectations of operational weakness from SUN's convention and retail business.

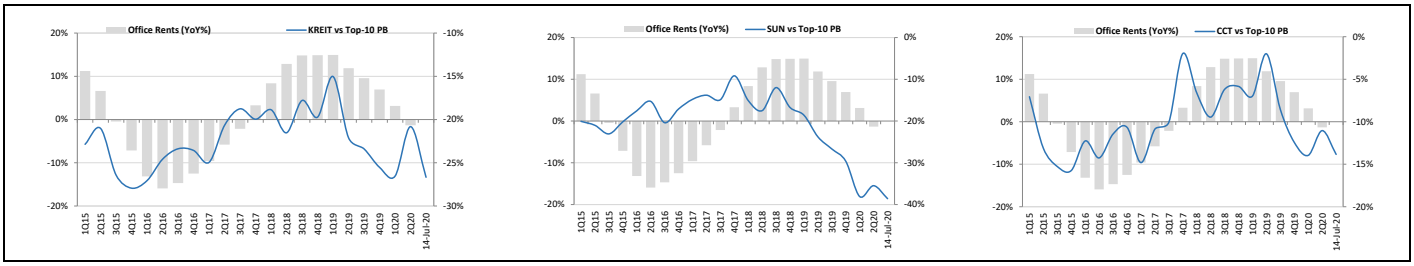
KREIT – trading discount implies steeper declines than warranted, leaving room for re-rating. At -27%, KREIT's P/B discount versus the top 10 largest S-REITs suggests that a 13% fall in Grade A office rents is being priced in, which we see as unwarranted given our expectations of a milder 10% decline in rents this year. We thus see room for a re-rating because KREIT appears poised to achieve better than expected dividend growth.

CCT – trading performance fairly reflecting expectations around Grade A rent declines: At -14%, CCT's P/B discount versus the top 10 largest S-REITs suggests that a 10% fall in Grade A office rents is being priced in, which appears fair and aligns with both our 2020 projections for Grade A office rents and our EW rating on the stock.

SUN – steepest discount but also reflects concerns around non-office business: At -39%, SUN's P/B discount versus the top 10 largest S-REITs appears to suggest that Grade A office rents could fall nearly 20%. However, we think that trading performance also reflects market concerns around SUN's convention business (already loss-making in 1Q), in addition to anticipated occupancy declines and negative reversions at Suntec City Mall, ultimately denting dividend growth prospects more severely than KREIT's or CCT's, in our opinion.

Exhibit 51:

Singapore office rent growth vs. REIT P/B premium/discount to 10 largest REITs



Source: Datastream, CBRE, Morgan Stanley Research. Top 10 S-REITs: AREIT, ART, CCT, CMT, SUN, CDREIT, KREIT, MCT, MINT and MLT

Japan: Market Conditions Could Worsen Further, Not in the Price

We expect conditions in the office market to steadily worsen for the next five years as a result of both economic and structural factors. Meanwhile, market consensus assumes that a healthy office market will continue.

We have EW ratings on Mitsubishi Estate and Sumitomo Realty...

...but are UW on Mitsui Fudosan: Our estimate of intrinsic value, assuming worsening of office market conditions, suggests there is room for the share price to come down more.

We downgraded our industry view for Japan Real Estate from In-Line to Cautious in our report of June 30, Mapping the New Normal: Structural Contraction in Office Market Ahead.

We think prospects for realtors are poorer in Tokyo than in other regions for two main reasons:

1. Growth in market rents continues even now, and we see the possibility that the market may not be considering that office market conditions could deteriorate more severely than in other areas.
2. We see relatively low prospects of growth in office demand on the grounds of securing physical distance, as office space per worker has been flat up to now.

We expect conditions in the office market to worsen for the next five years: The historical correlation between Tokyo office demand and real GDP growth suggests that the vacancy rate will rise in the second half of 2020.

Consider also two other factors:

1. Some 40% of companies appear to have adopted WFH since the state of emergency was declared.
2. There has been a 20% drop in office space per worker used by firms who have taken this step by comparison with firms who have not.

Thus, we estimate that office demand could show a further fall of 8% from 2021.

Consequently, we expect the Tokyo vacancy rate to rise from 2.0% currently to 9.8% over the next five years, and unit rents, which are still rising at present, to fall 26%.

In our bear case scenario, moreover, where WFH depresses office demand 16%, we see the vacancy rate rising to 12.0% over the next five years while unit rents fall 42%.

We strongly favor a cautious stance on Japanese real estate stocks: Real estate stock P/NAV has already dropped to ~0.45x, but our discussions with investors suggest that structural deterioration in office market conditions owing to the rising popularity of WFH is still not sufficiently discounted. Hence, we do not rule out the possibility of further falls in share prices.

We have EW ratings on Mitsubishi Estate and Sumitomo Realty. However, we are UW on Mitsui Fudosan, where our estimate of intrinsic value, assuming worsening of office market conditions, suggests that there is room for the share price to come down more.

(1) Sizing the market

CBD Tokyo had 124mn sq. ft. of Grade A office stock (GFA basis) as of 2019, with a vacancy rate of slightly below 2%. Assuming US$1,038 psf based on average appraisal value of large-scale buildings owned by J-REITs in the CBD Tokyo area, we estimate the total office stock is worth US$129bn.

Three companies – Mitsui Fudosan, Mitsubishi Estate, and Sumitomo Realty – are the key players with combined market cap of US$54bn moving with the office outlook.

(2) Demand driver – tenant mix

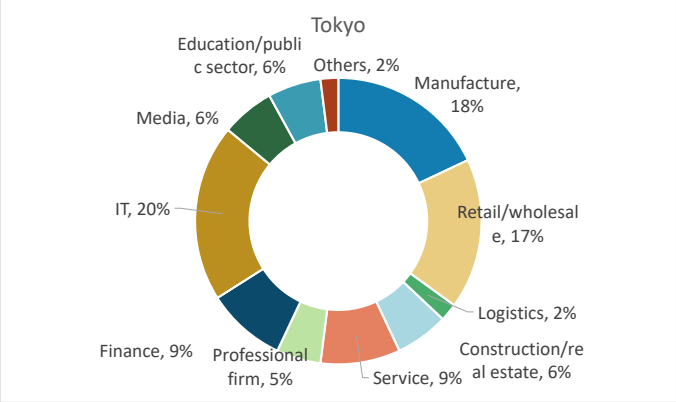
The breakdown of Tokyo office tenants by industry shows manufacturing and retail/wholesale – industries that may not be perceived generally as suited to WFH – occupying relatively high weightings. However, precisely because uptake of WFH has been slow in these fields in Japan so far, we see considerable scope for office demand to fall if they do introduce WFH.

Exhibit 54 shows changes in the telework adoption rate before and after the state of emergency declaration by administrative and sales-oriented businesses (data communications industry, financial and insurance industries) and front-line operation and personal service businesses (construction and manufacturing industries, transportation and postal industries, etc.).

While 34.3% of companies in administrative and sales-oriented businesses adopted telework from March-April 2020, 40.2% in front-line operations and personal service businesses added telework during that time. Office demand setbacks implied by these results are 6.9% in administrative and sales-oriented businesses and 8.0% in front-line operation and personal service businesses.

Exhibit 52:

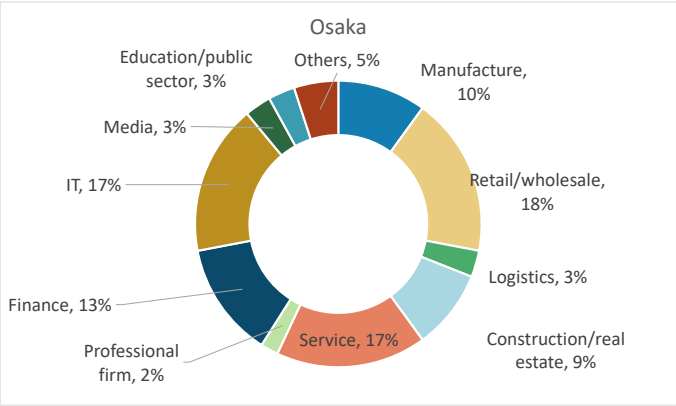
Tokyo office trade mix



Source: Sanko Estate, Morgan Stanley Research

Exhibit 53:

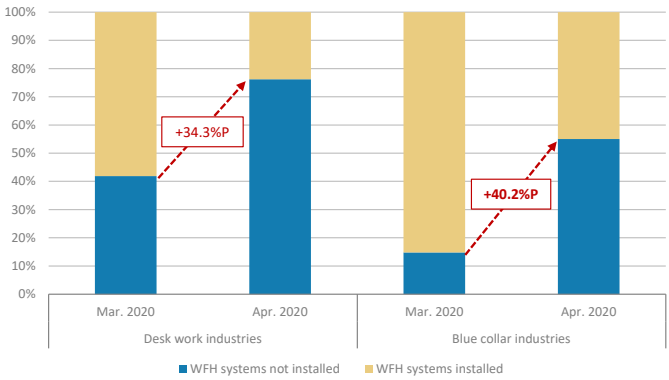
Osaka office trade mix



Source: Sanko Estate, Morgan Stanley Research

Exhibit 54:

Many front-line operation/personal service businesses introduced home-working for the first time



Source: Tokyo Metropolitan Government, Morgan Stanley Research

(3) Office rents set for long-term contraction

Vacancy rates have started to climb in 2020 ahead of an anticipated economic recession, and we expect they will continue upward from 2021 as companies leave offices because of the increase in tele-working. As a result, we look for the office vacancy rate in Tokyo's five central wards to approach 10% (vs. 1.6% currently), putting office rents at real risk of a long-term slide.

Based on the broad correlation between office demand and economic trends, we think office prices in the near term are bound to correct, irrespective of the spread of telework in corporate Japan. In this section of the report, we delve into the outlook for the office market without yet factoring for the negative impact from telework.

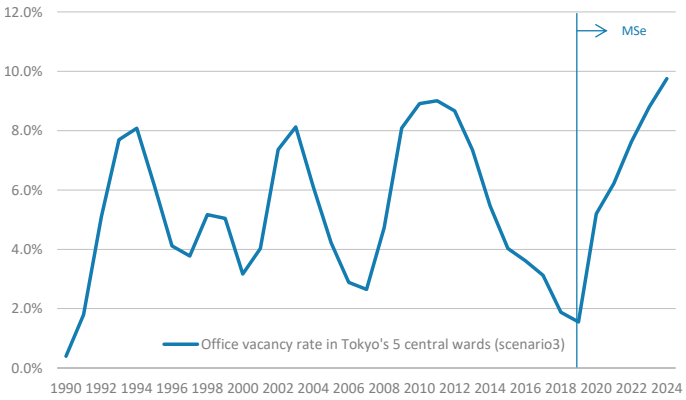
Expect two straight years of historically low supply in 2021-22

The outlook for office supply has not changed. In 2020, we expect a wave of supply to hit the market, equivalent to 5.3% of existing stock. For 2021, however, we forecast a record-low of 1.5%, with the same (1.5%) again in 2022. In other words, we anticipate two straight years of record-low office supply.

In terms of gross office supply, Mori Building's "2020 Survey of Large Office Building Supply in the 23 Wards of Tokyo" includes the growth rate for office supply on a floorspace basis, which essentially applies to Tokyo's five central wards. Based on these data, we assume that demolished office space remains at a comparable rate to the past five years.

Exhibit 55:

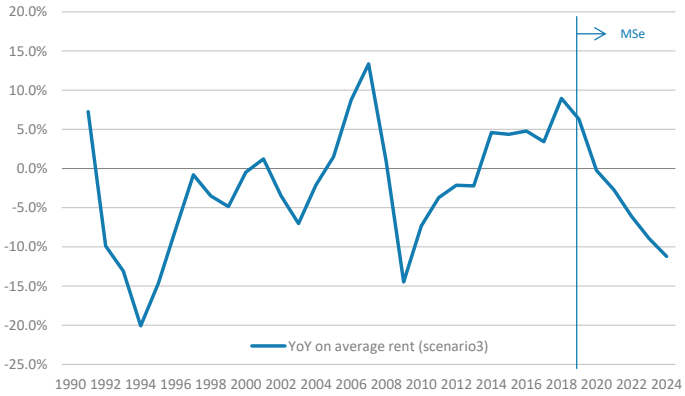
Vacancy rate in Tokyo's five central wards headed for record high



Source: Miki Shoji, Morgan Stanley Research, MSe=Morgan Stanley Research estimates

Exhibit 56:

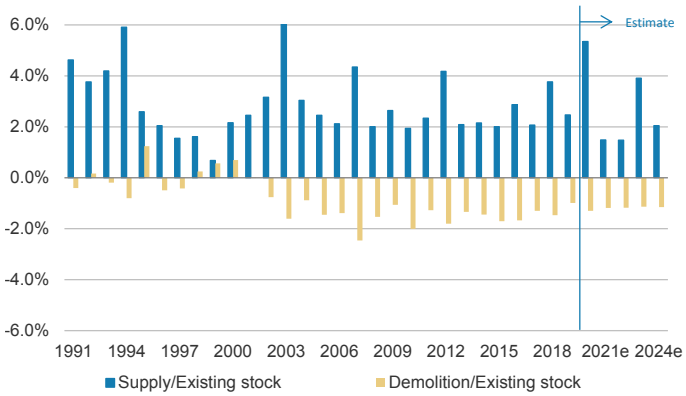
Average rent to contract over the long term



Source: Miki Shoji, Morgan Stanley Research, MSe=Morgan Stanley Research estimates

Exhibit 57:

Expect office supply to remain historically low for two consecutive years in 2021-22



Source: Miki Shoji, Morgan Stanley Research, e = Morgan Stanley Research estimates

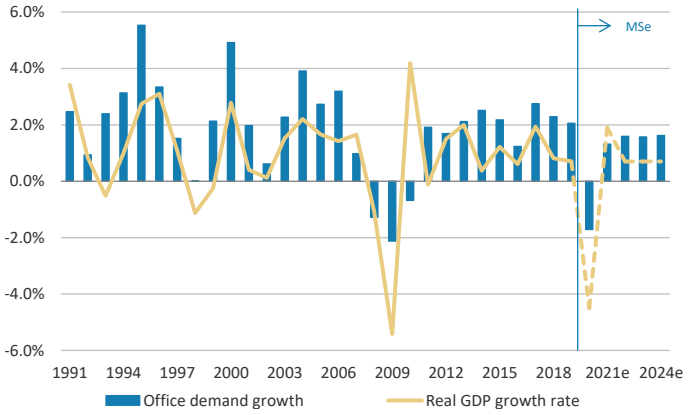
Expect a big fall in demand in the near term

Looking at office demand, based on our macro team's real GDP forecast, we expect a big decline in 2020, then a slow expansion in 2021. In light of near-term deterioration in corporate earnings, moves to avoid renting office space appear likely. At this point, we have not factored in any decline in demand resulting from the increase in WFH.

With new offices hitting the market, however, tenants who are moving in would typically give their current office owners a lease cancellation notice of 6-12 months. In our model, we thus assume that these resulting vacancies, equating to roughly half of the floorspace of these new offices, hit the market in the year before the new offices' opening. In adjusting for this, our office demand (floorspace) growth forecasts are at -1.7% for 2020, +1.3% for 2021, and +1.6% for 2022.

Exhibit 58:

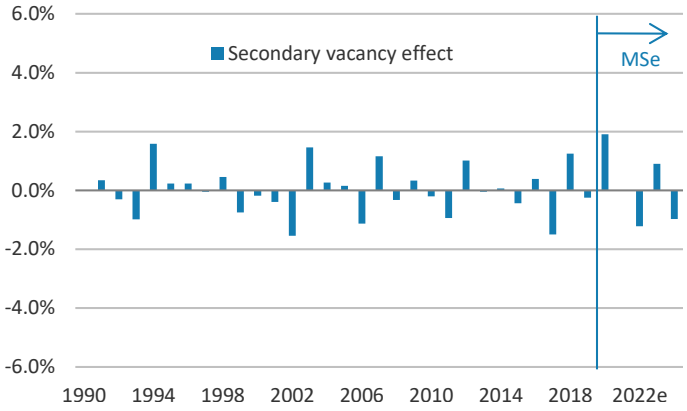
We expect a sharp decline in office demand in the near term



Source: Miki Shoji, Morgan Stanley Research, e = Morgan Stanley Research estimates

Exhibit 59:

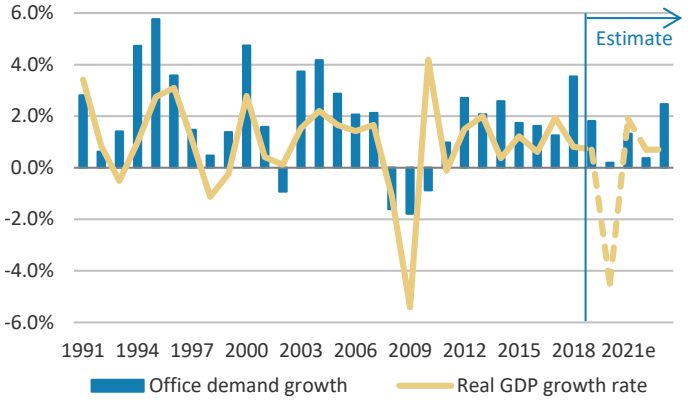
Impact of new office supply on demand (floorspace basis)



Source: Miki Shoji, Morgan Stanley Research, e = Morgan Stanley Research estimates. Assuming half of newly supplied floor area gets recognized as secondary vacancy a year before a new building's completion.

Exhibit 60:

Growth in demand for office floorspace, after taking into account effects of new supply



Source: Miki Shoji, Morgan Stanley Research, e = Morgan Stanley Research estimates

Expect the vacancy rate to jump in 2020

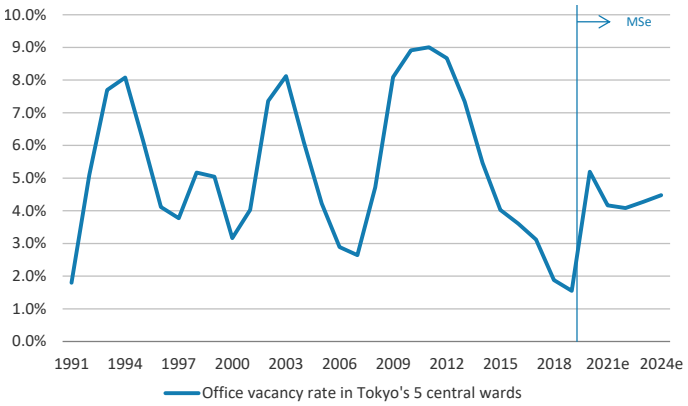
Based on expected office demand and new supply entering the market, even without factoring in any negative impact on demand from telecommuting, we would expect the office vacancy rate in Tokyo to rise from the current 1.6% to 5.2% by end-2020. With economic recovery resuming in 2021-22, we look for the vacancy rate to fall back to 4%-4.5%, but we think this will trend down subsequently as new office supply comes onto the market.

Based on this vacancy rate outlook, we believe growth in listed rents, currently at around +6.7%, will tumble to -0.2% by end-2020. Though we expect improvement to +2.2% by end-2021 and +2.4% by end-2022, growth beyond that is likely to gradually taper off.

Our forecasts for growth in office asking rents are mainly based on our expected vacancy rates, as rates of vacancies and growth in asking rents have shown a strong inverse correlation historically.

Exhibit 61:

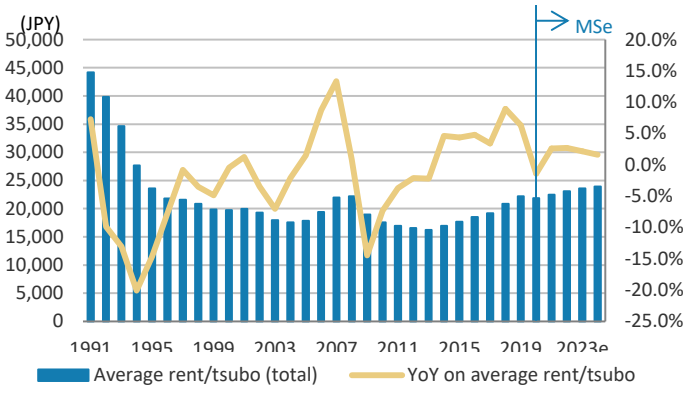
The vacancy rate may jump to ~5% during 2020



Source: Miki Shoji, Morgan Stanley Research, e = Morgan Stanley Research estimates

Exhibit 62:

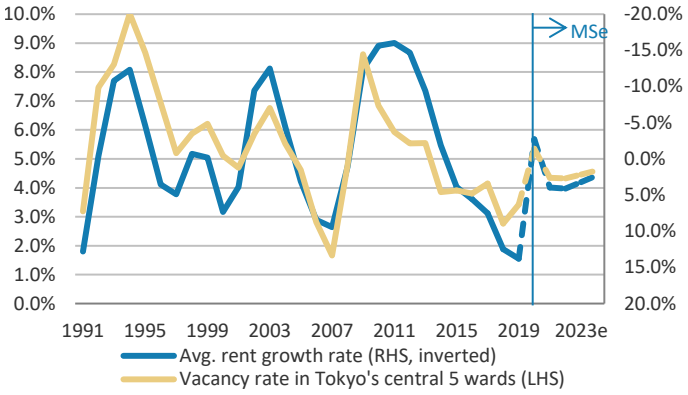
Expect growth in rents to slow in 2020



Source: Miki Shoji, Morgan Stanley Research, e = Morgan Stanley Research estimates. The average rent and the average rent growth are as of year-end.

Exhibit 63:

Vacancy rate and average rent growth have historically shown a strong inverse correlation



Source: Miki Shoji, Morgan Stanley Research, e = Morgan Stanley Research estimates

(4) WFH specific rental outlook – a further 8% decline in office demand due to increased telework

Besides a softening of office market conditions related to economic pullback discussed in the previous section, we think office demand could drop another ~8% on a latent basis because of recent expansion of telework. This impact might manifest itself over the next five years.

20% latent decline in office demand at 40% of tenants

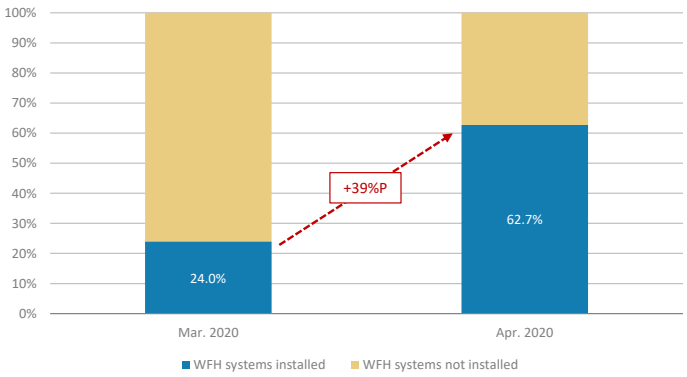
According to a survey conducted by the Tokyo Metropolitan Government in April 2020 (with responses from 394 companies), 62.7% of respondents have adopted telework, indicating a 38.7ppt rise from 24.0% in March 2020.

Meanwhile, according to a survey implemented by Xymax Corporation, a major office intermediary firm, in October 2019 (with responses from 1,116 companies), leased office floor area per employee at companies utilizing a "work from home" program is 20% less than at companies without this type of program.

If the 38.7% of companies that have newly adopted a telework program reduce office floor area by 20% per employee, a simple calculation suggests a decline in office demand of about 8% (38.7% x 20%).

Exhibit 64:

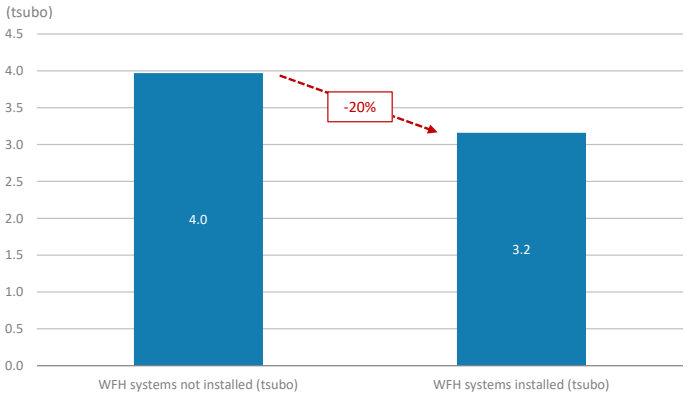
Ratio of companies with home-working setup is up 38.7ppt



Source: Tokyo Metropolitan Government, Morgan Stanley Research

Exhibit 65:

Per-person floor space for firms with home-working set-ups is 20% smaller



Source: XYMAX corporation, Morgan Stanley Research

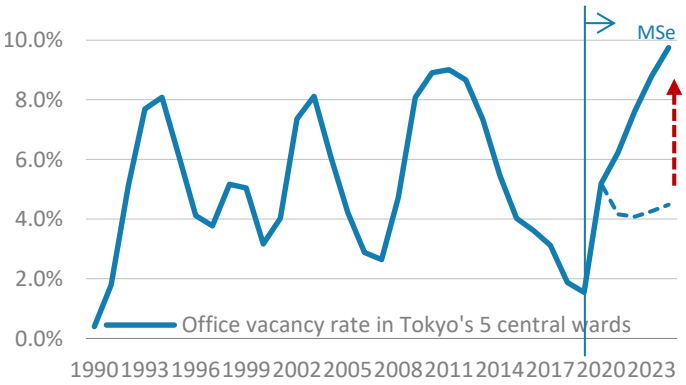
Expecting manifestation of lower demand related to telework from 2021

We cannot rule out the possibility of sensitivity to arrangements of physical distancing curtailing office cancellations related to telework until COVID-19 settles down, and this is why we expect office cancellations due to more widespread teleworking to commence in earnest once the virus has run its course.

Since our healthcare team forecasts development of vaccines during 2021, we assume a pickup in the roughly 8% telework-led demand downturn from 2021. We thus project a rise in the office vacancy rate to about 9.8% over the next five years and an easing of offered rents to a roughly 11.2% YoY annual decline.

Exhibit 66:

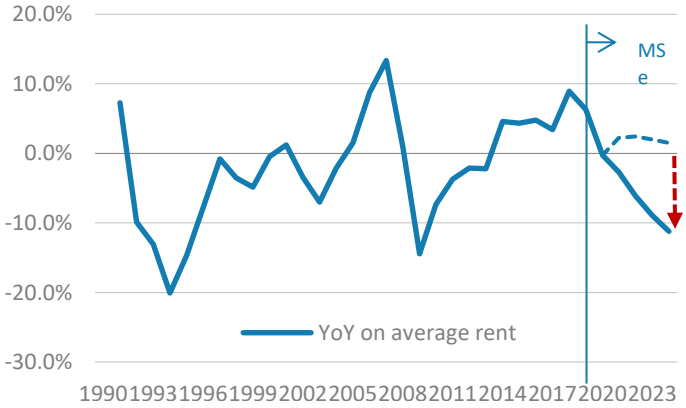
Expect office vacancy rate in Tokyo to rise to around 9.8%



Source: Miki Shoji, Morgan Stanley Research, MSe=Morgan Stanley Research estimates

Exhibit 67:

Expect decline in asking rents to widen to annual -11.2%



Source: Miki Shoji, Morgan Stanley Research, MSe=Morgan Stanley Research estimates

(5) Scenario analysis and bull/bear rent outlook

Base case scenario: office demand stays flat

In our base case scenario, the vacancy rate rises to 9.8% over the next five years and the decline in unit rents accelerates to 11.2% (for a cumulative fall of 26%). We expect office demand to stay more or less flat, as detailed below.

Change in the quantity of demand owing to WFH: We forecast a drop in demand of 8% as a result of increased WFH, given that some 40% of companies that adopted WFH for the first time after the state of emergency declaration use 20% less office space.

Change in the quantity of demand as a result of physical distancing measures: Our outlook for Tokyo supply/demand does not envisage changes in the quantity of demand resulting from physical distancing measures. Unlike in Hong Kong or Singapore, office space per worker has remained constant for the last 10 years or more.

Change in the quantity of demand arising from other factors: We expect other factors to fuel an 8% rise in demand. We attribute the continuous rise in office demand in the five center-most wards of Tokyo to now to expansion of the five wards' share of the Greater Tokyo office market, as well as a rising share for large buildings (included in statistical surveys) within the five wards. We expect these trends to continue.

Bull case scenario: office demand increases 2%

Our bull case scenario has the vacancy rate rising to 7.1% in the next five years and the decline in unit rents widening to 4.9% (for a 3% cumulative fall). Office demand increases about 2%, as detailed below.

Change in the quantity of demand owing to WFH: The drop of 8% is the same as in the base case.

Change in the quantity of demand as a result of physical distancing: Calls for physical distancing fuel a 5% increase in office space per worker.

Change in the quantity of demand arising from other factors: In this scenario we assume that demand increases 5% as a result of other influences – a slower rate than in the base case, as a lower vacancy rate and higher rents prevent demand from materializing.

Bear case scenario: office demand falls 3%

In our bear case, the vacancy rate reaches 12.0% and the fall in unit rents accelerates to 16.6% (for a cumulative fall of 42%) over the next five years. Office demand contracts about 3%, as detailed below.

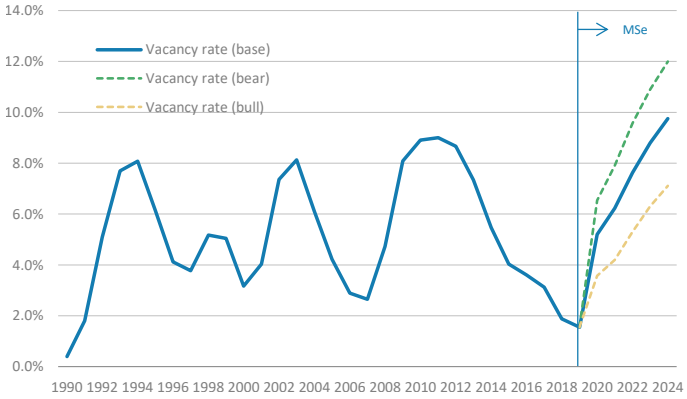
Change in the quantity of demand owing to WFH: With office space down 20% at some 80% of companies, demand declines 16%.

Change in the quantity of demand as a result of physical distancing: Our outlook for Tokyo supply-demand does not envisage demand changing as a result of physical distancing measures.

Change in the quantity of demand arising from other factors: Here we see other factors increasing demand 13%, a more bullish projection than in the bull case as a rising vacancy rate and steep fall in rents stimulate demand.

Exhibit 68:

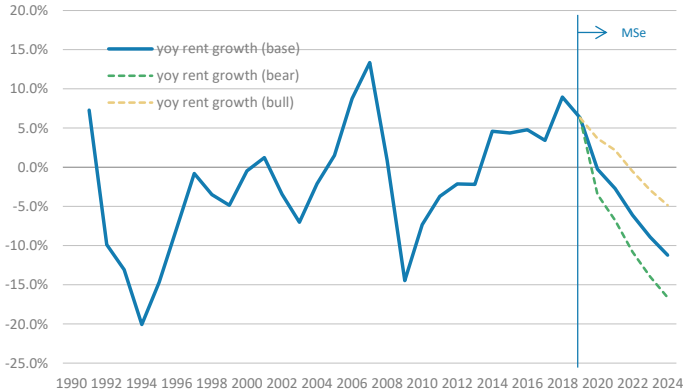
Vacancy rate in Tokyo's five central wards headed for record high



Source: Miki Shoji, Morgan Stanley Research, MSe=Morgan Stanley Research estimates

Exhibit 69:

Average rent to contract over the long term



Source: Miki Shoji, Morgan Stanley Research, MSe=Morgan Stanley Research estimates

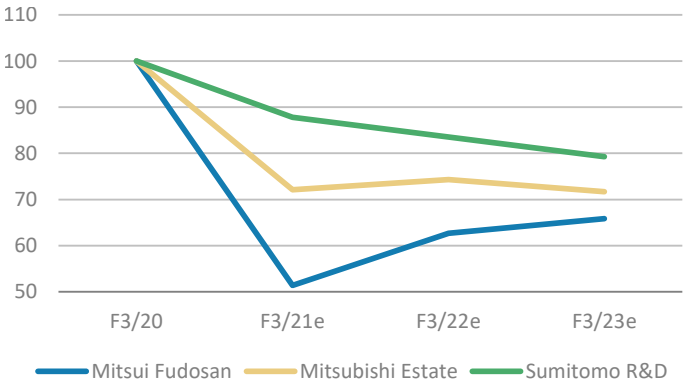
(6) What is in the price and stock ideas

In our base case, we see NAVPS falling about 10% for Mitsui Fudosan, 20% for Mitsubishi Estate, and 30% for Sumitomo Realty over the next three years, even if cap rates hold flat.

In setting our price targets, we therefore apply discounts to historical average P/NAV of 10% in the case of Mitsui Fudosan, for 0.80x, 20% for Mitsubishi Estate, for 0.55x, and 30% for Sumitomo Realty, for 0.45x – differences that lead us to assign ratings of EW to Mitsubishi and Sumitomo, and UW for Mitsui.

Exhibit 70:

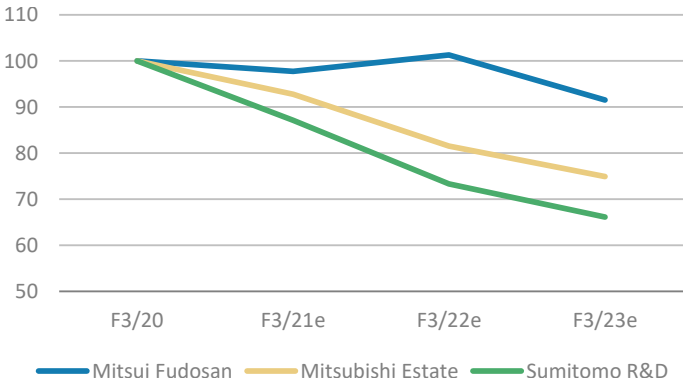
EPS outlook (F3/20=100)



Source: Company data, Morgan Stanley Research, e=Morgan Stanley Research estimates

Exhibit 71:

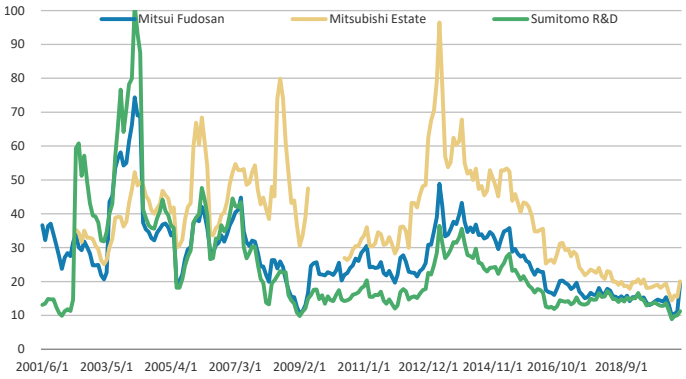
NAVPS outlook (F3/20=100)



Source: Company data, Morgan Stanley Research, e=Morgan Stanley Research estimates

Exhibit 72:

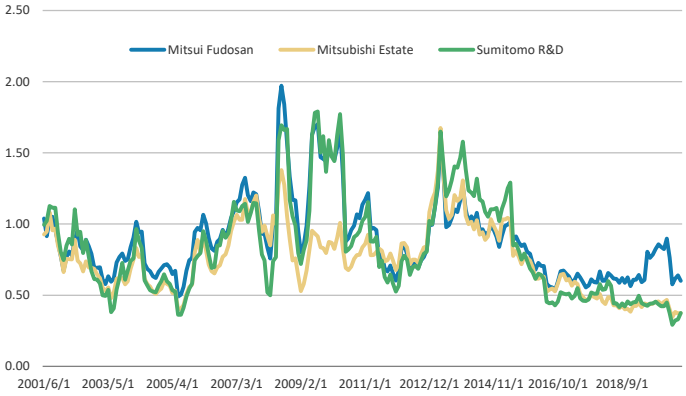
P/E of major real estate developers



Source: Refinitiv, Morgan Stanley Research

Exhibit 73:

P/NAV of major real estate developers



Source: Refinitiv, Morgan Stanley Research

Australia: Office Rents Could Decline 10-20%

Vacancy in the key cities of Sydney and Melbourne is already edging up towards 8%, from 5% and 3.4%, respectively, as of December 2019. In our view, this upturn has been driven more by the slowing economy than the work-from-home theme (too early).

We estimate that if the WFH concept becomes more entrenched after COVID-19, vacancies in Sydney and Melbourne could escalate to 10%-15%, resulting in market rent declines (net effective) of 10%-20%. This is based on the assumption that incentives could escalate to 30% from mid-20% currently.

Our estimates suggest that the share prices of DXS, MGR, and GPT are factoring in a rent decline of c. -20% as a new normal. We prefer DXS over GPT (more retail-focused) as most of the stocks are factoring in a worst-case scenario in for office rental decline.

(1) Sizing the market

The two main office markets in Australia are Sydney and Melbourne. Each of these two CBDs has c. 5m sqm of office space (so making up c. 70% of Australia's CBD office space), of which 60%-65% is classified as Prime Grade (so Premium, or A Grade). In total, we estimate the value of CBD office stock in Sydney and Melbourne at c. A$176bn.

Exhibit 74:

Office stock (sqm) in Australia's two major CBDs, and approximate value (A$)

	Sydney	Melbourne	Total	*Total US$m*
Prime Grade GLA ('000 sqm)	3,094	3,320	6,414	
Secondary Grade GLA ('000 sqm)	1,930	1,633	3,563	
Total	**5,024**	**4,953**	**9,977**	
Valuation Prime (A$/sqm)	A$20k-A$25k	A$15k		
Valuation Secondary (A$/sqm)	A$15k-18k	A$10k		
Prime Grade Value A$m	69,626	49,797	119,424	*83,596*
Secondary Grade Value A$m	31,841	24,498	56,339	*39,437*
Total A$m	**101,467**	**74,295**	**175,762**	
Total US$m	*71,027*	*52,007*	*123,034*	

Source: Morgan Stanley Research estimates, JLL

As of June 2020, the overall vacancy rate was 7.5% in Sydney and 7.7% in Melbourne (5.0% and 3.4%, respectively, in December 2019). One interesting feature about the recent rise in vacancy is the return of the sub-lease space, which was 10k-20ksqm in both markets in 2018. This has now escalated to c. 70ksqm each in both Sydney and Melbourne (as at June 2020). We suspect that this is only part COVID-related – that's because, in practice, companies would not have been able to react so quickly in giving up space. Accordingly, there is more downside risk on the horizon, in our view. It's worth highlighting that sub-lease vacancies in Sydney increased to 105ksqm during the Global Financial Crisis in 2009.

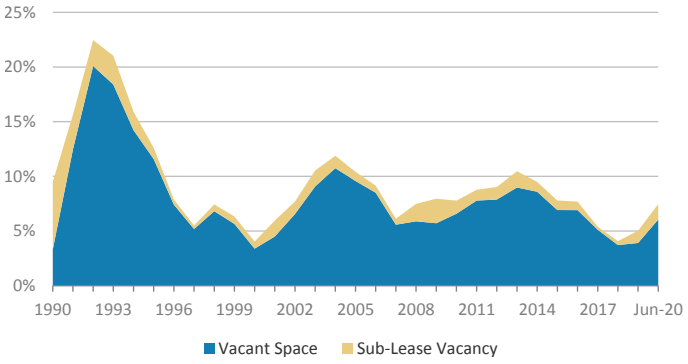
(2) Demand drivers – tenant mix profile

Based on the leases signed in Sydney and Melbourne over the last 10-20 years, the top three industries take up as much as 60% of space.

- **Finance and Insurance:** The dominant occupier sector in both Sydney and Melbourne, taking up one-third of space in Sydney and around one-quarter in Melbourne;
- **Professional Services:** The second largest occupant industry, accounting for 20%-25% of space;
- **Government, or Public Administration:** The third largest space user, taking up 10%-15% of office GLA.

Exhibit 75:

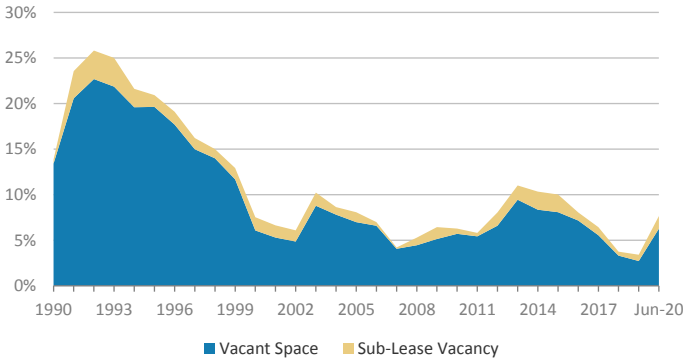
Sydney CBD office vacancy



Source: Morgan Stanley estimates, JLL

Exhibit 76:

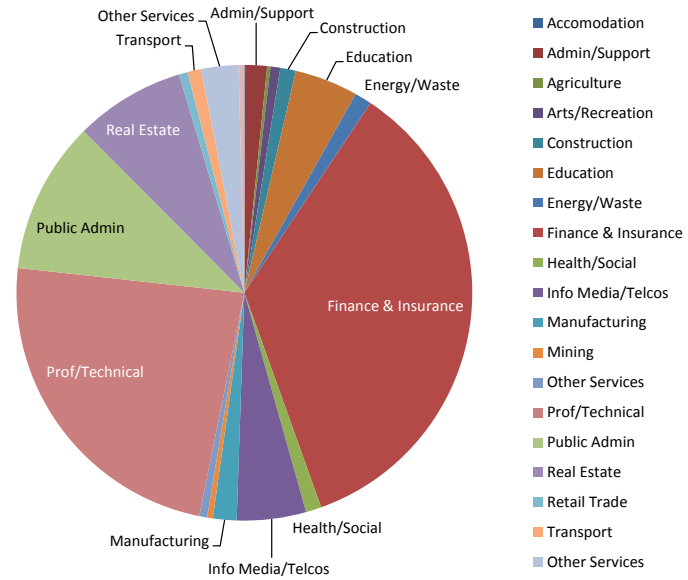
Melbourne CBD office vacancy



Source: Morgan Stanley estimates, JLL

Exhibit 77:

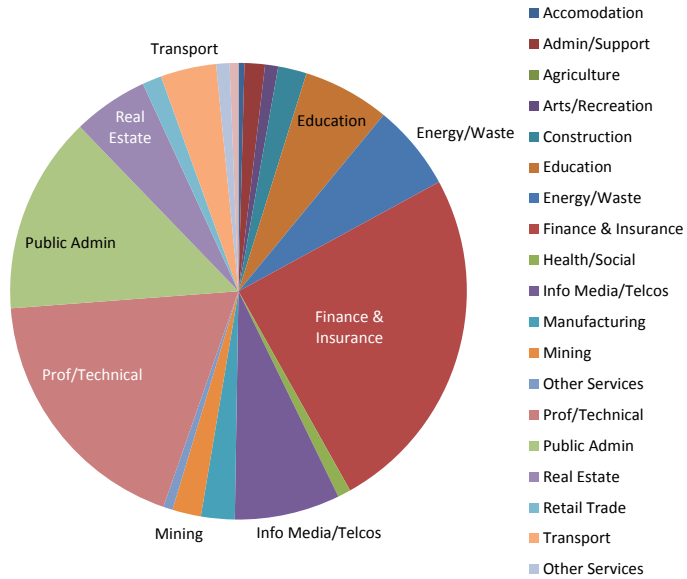
Sydney prime CBD office – occupier industries



Source: Morgan Stanley Research estimates, JLL

Exhibit 78:

Melbourne prime CBD office – occupier profiles



Source: Morgan Stanley Research estimates, JLL

(3) Australia's office vacancy and rent outlook

Traditionally, the key relationship office occupancy has had is with (un)employment. We have written previously that there is a c. 0.7 correlation between job ads and office demand – see Australia Property: When Jobs Are Lost . . . (21 Apr 2020). The chart below illustrates the clear relationship between Australia's unemployment rate and office vacancies. The higher the jobless rate, the more vacant CBD office spaces there are in Sydney and Melbourne CBD.

In terms of the latest data:

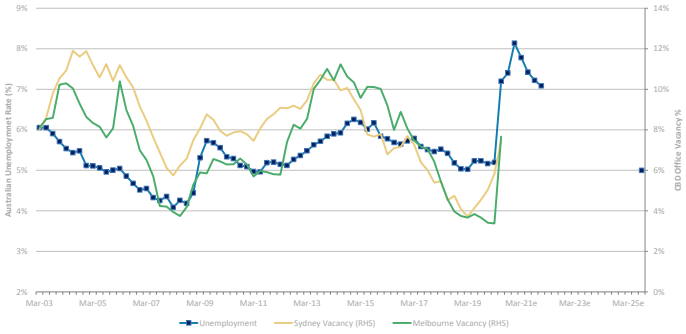
- As of June 2020, Sydney CBD's vacancy is at 7.5%, up from 4.1% in December 2018 and 5.0% in December 2019;
- As of June 2020, Melbourne CBD's vacancy is at 7.7%, up from <4% as at December 2018 and December 2019;
- Morgan Stanley forecasts assume that the unemployment rate will be 8.1% by December 2020 and 7.1% by December 2021.

We believe that the June 2020 number includes minimal impact from WFH, whether it be sub-lease vacancy or tenants actively handing space back. Given the nationwide lockdown was in March-May (and Victoria's second lockdown is from early July), we suspect that much of the rise in vacancy is simply becausxe of a weakening economy, rather than structural changes in work space usage.

According to our Australia Economics team, a c. 5% unemployment rate exists when the country is at full employment. Using that number as a medium- to longer-term target unemployment rate once the economy recovers from COVID-19 (potentially by 2022, according to our Economics team), and using our assumption that there is a c. 0.7 correlation between job ads and office demand, we believe it is fair to assert that Sydney and Melbourne CBD office vacancies could reach c. 6% after COVID. We note, this is a rough estimate because office is a supply/demand-driven industry, so actual vacancy depends heavily on the timing of any new developments.

Exhibit 79:

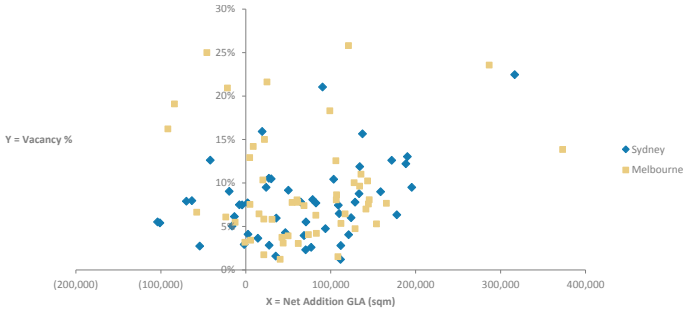
CBD office vacancy has generally tracked in the same direction as the unemployment rate



Source: Morgan Stanley Research estimates, JLL, ABS

Exhibit 80:

Vacancy rates are generally higher in periods where there are more net additions of space



Source: Morgan Stanley Research estimates

The last piece of the puzzle that we need to devise assumptions around is the impact of WFH. To begin that process, we analysed several Australian surveys outlined below that are in the public domain:

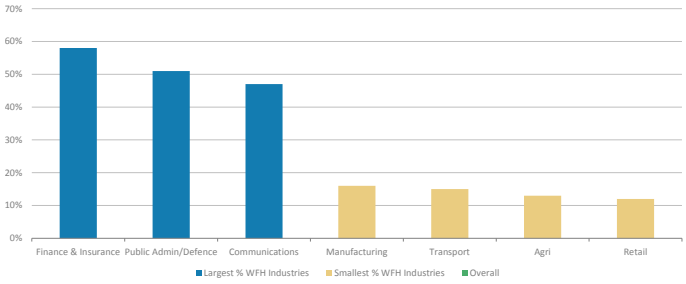
- Roy Morgan: The top three industries, with c. 50% of staff WFH during April/May 2020, were Finance & Insurance, Public Admin, and Communications - all big CBD office space users.
- Redback Connect: 86% of employees WFH during the lockdown want to continue to do so at least partially, and 22% have been offered that as an option going forward.
- Boston Consulting Group: For those workers who can WFH, 41%-60% prefer to continue doing that 2-3 days/week after COVID. Our view? What employees want is one thing, what employers are willing to do is another.
- IWG: Around 70% of workers say their current employer has some form of flexible working policy in place already.

The Australian Property team also participated in an AlphaWise survey that looked at people's WFH intentions after COVID. Of the c. 1,530 Australians polled:

- Approximately two-thirds of respondents either partly or fully worked from home during the COVID period.
- Of those who did WFH, 13% do not want to WFH in future, 35% want to WFH full-time going forward, whilst the rest prefer a hybrid approach.
- Looking at the results through a bullish lens: 65% of respondents said they want to work in the office, in part or in full. But in a social distancing and hygiene-focused era, it is possible that companies would have to give each staff member a dedicated desk.
- Looking at the data through a bearish lens: 35% of people do not want ever to work in an office again – they want to work from home on a full-time basis;
- **Our survey is based on the assumption that employers allow employees to choose where they work.** So, ultimately, it is still up to each company's policy as to how flexible their work arrangements are.

Exhibit 81:

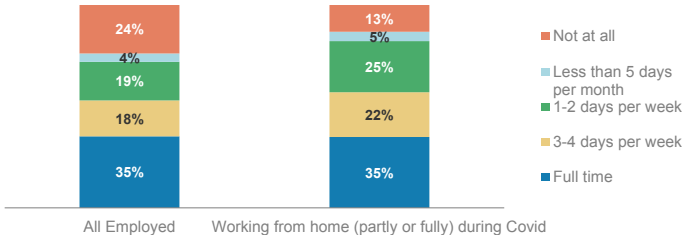
Australia: percentage of people working from home in Apr/May 2020 – the industries with the highest and lowest share



Source: Roy Morgan

Exhibit 82:

Intention to WFH in future (all people surveyed, and people who partially or fully worked from home during COVID-19)



Source: Morgan Stanley Research estimates, AlphaWise

We believe that the industries most likely to have staff WFH currently occupy c. 70% of CBD office space (74% in Sydney and 65% in Melbourne). If we then assume that 25% of staff will be given the option to WFH in future (as a new normal, after COVID), then this could imply c. 20% of office space could be vacated.

However, we think this percentage is overly high, given the survey responses we analysed showed that even employees who like to WFH seem to prefer to do so on a partial basis rather than a permanent basis. We think it is more likely that companies will need to retain a desk/office for some (if not all) staff members even if employees have a telework arrangement.

We estimate that 8-9% of office space may be vacated as a result of a greater proportion of staff WFH in future.

Exhibit 83:

We estimate 8-9% of office space could be vacated as a result of WFH

	Sydney	Melbourne
Sectors most prone to WFH - % of CBD office		
Finance & Insurance	35%	25%
Professional/Technical Services	24%	18%
Public Admin	11%	14%
Info Media/Telcos	5%	7%
Market share of at-risk sectors	**74%**	**65%**
Assume 25% WFH option in future		
Office space at risk	**19%**	**16%**
Assume 50% partial WFH		
Office space vacated	**9%**	**8%**

Source: Morgan Stanley Research estimates

The timing of vacancy is a fluid concept, and could depend on three factors:

1. Duration of leases in place,
2. Whether or not landlords are willing to take space back and how lease tails are negotiated, and
3. Each tenant's decision-making timeframe – in that some companies may take longer than others to implement revised remote working policies.

However, given the ability for tenants to simply sub-lease spaces whenever they want, it is plausible that the impact of WFH will be felt over the next 1-3 years (i.e., by 2023).

Assuming employers progressively move towards higher penetration of WFH over the next three years, the two charts below illustrate our view that vacancy in Sydney and Melbourne CBDs could escalate to c.15% by 2023.

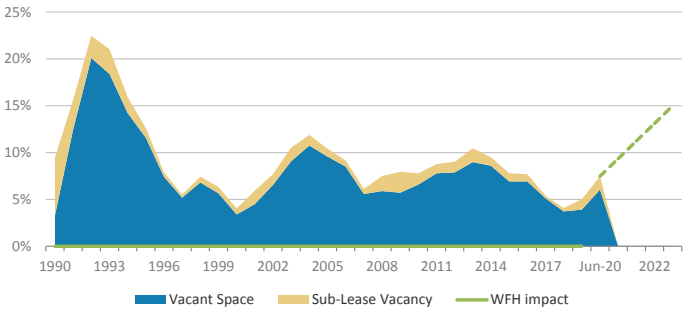
However, as mentioned earlier, this assumes we hold a number of other factors constant, including:

- Incentive and effective rents,
- Net supply, and
- Employment market and the economy.

(We note that according to official JLL forecasts as of December 2019, Sydney and Melbourne vacancies are expected to hover around 10%-12% from December 2020-2026)

Exhibit 84:

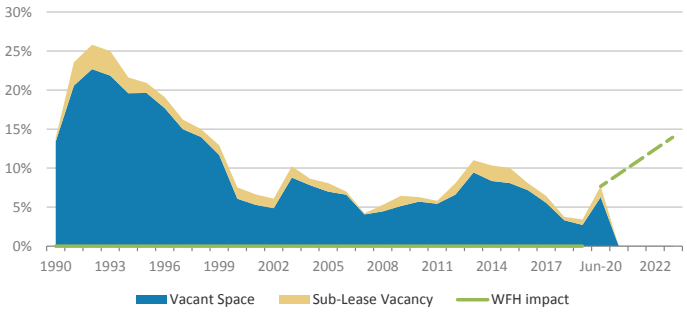
Sydney office vacancy – if WFH becomes widespread



Source: Morgan Stanley Research estimates, JLL

Exhibit 85:

Melbourne office vacancy – if WFH becomes widespread



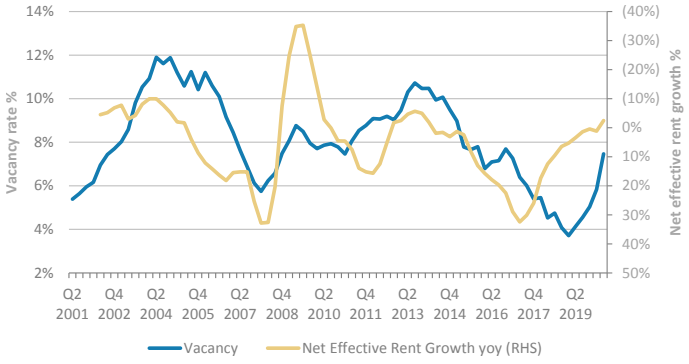
Source: Morgan Stanley Research estimates, JLL

In terms of the impact on rent (in the scenario where WFH drives vacancy up by c. 10%), we have used multiple factors to triangulate the effect:

- **The last time vacancy increased to >10%:** In 2001-2004, Sydney's office vacancy increased from 6% to >10%; during this time net effective rent in the market declined 15%-20%. In 2008-2013 (i.e., capturing the GFC period), Sydney's vacancy also increased from 6% to >10%, with net effective rent declining 25%-30%. In Melbourne, similar movements in vacancies brought 15%-30% declines in net effective rents.
- **Change in incentives vs. vacancy:** Of interest, in 2008-13, face rent continued to increase despite higher vacancy, although incentives in both Sydney and Melbourne increased significantly, almost c. 20%. So, applying this concept to landlords' earnings, FFO would have continued to increase, but AFFO (i.e., cash) would have declined.
- **Net withdrawals:** The reason Melbourne had more extreme declines in rent as vacancies rose is because of continuous additions to stock. Since 2002 there has not been a year of net decrease in office space in Melbourne. In contrast, Sydney – during 2007-09 – had three consecutive years of office space declines, perhaps softening the impact of the GFC (in part).

Exhibit 86:

Relationship: Sydney vacancy vs. rent growth



Source: Morgan Stanley estimates, JLL

Exhibit 87:

Dot plot of quarters since 2001: Sydney office vacancy vs. lease incentives

Source: Morgan Stanley estimates, JLL

We estimate that by 2023, Sydney and Melbourne office vacancy could be 10%-15% if WFH as a concept is adopted by key industries. In turn, this would lead to a 10%-20% decline in net effective rent over this period.

Swing factors would include the well-being of the economy, unemployment rate, supplies/withdrawals (*average annual net increase in Sydney is c. 1% of stock, and c.1.5% in Melbourne*), and work space ratio requirements of each occupier.

(4) Workspace ratio is a potential swing factor

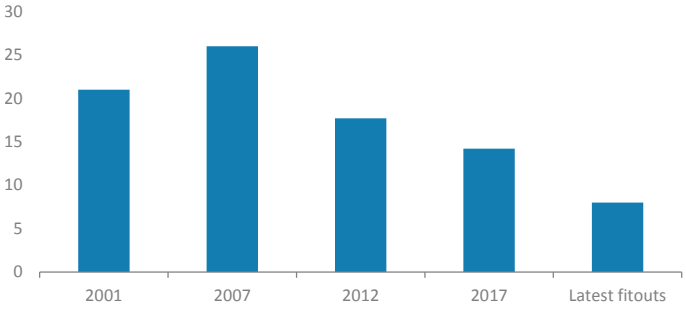
We estimate there are c. 330k white collar workers in the Sydney CBD at present, with a similar number in Melbourne. This implies c. 15.5sqm per person across all CBD office space. However, within each area, the space is likely much tighter – the overall ratio allows for common-use areas such as kitchens, bathrooms, meeting rooms, etc.

Anecdotally, new buildings with modern fit-outs have workspace ratios as tight as 8sqm-12sqm per person, incorporating designs whereby workers congregate in zones, to allow for collaboration, and activity-based working. As recently as two years ago, MGR was toying with the idea that the value of the office should include a factor for how many workers it could hold, implying that newer age office designs that could fit more people were considered to be more valuable. The current health concerns and requirements for social distancing may lead that argument to become less convincing.

At this stage, the impact of longer-term social distancing requirements on tenants remains unclear. For instance, some companies may consider having employees share desks with others depending on who works from home/office, whilst other companies may opt to give each staff member a dedicated desk, even if occupancy rates are low (i.e., in the office only 60% of the time).

Exhibit 88:

Work space ratio – Sydney CBD (sqm office space per worker)



Source: Morgan Stanley Research estimates, Landcom, DXS

(5) Stocks exposed to office segment – DXS, MGR, GPT

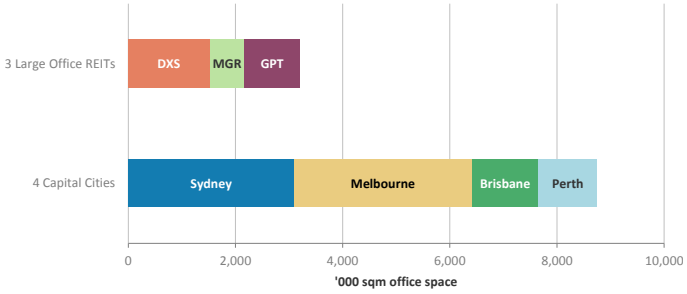
In terms of ownership, we estimate that the three biggest listed office landlords – DXS, MGR, and GPT – own c. 40% of the prime grade assets across Australia's four capital cities (Sydney, Melbourne, Brisbane, and Perth).

We would flag that property fund manager CHC also manages A$18bn of office assets across its various funds, with a further c.A$5bn of developments in the pipeline. But, those assets sit in unlisted partnerships and are spread across suburban and CBD markets. Thus, we do not classify CHC as a typical office stock, but acknowledge that its earnings are somewhat tied to the well-being of the office market. Office makes up 46% of CHC's AUM.

The three major listed office landlords have a combined market capitalisation of A$26.5bn, or US$18.6bn as of July 2020. There are other pure play office REITs in Australia not under our coverage, but they are generally landlords to suburban offices, or are of a size that sit outside of the ASX50.

Exhibit 89:

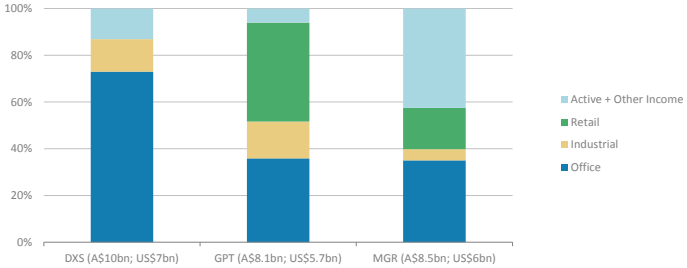
Ownership of Prime Grade CBD office space across four major capital cities in Australia



Source: Morgan Stanley Research estimates, JLL, Company data

Exhibit 90:

Office rent as a contributor to each company's total earnings; and market cap of each stock



Source: Company data, Morgan Stanley Research estimates

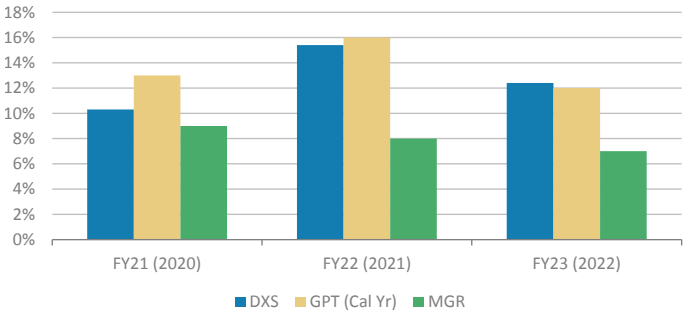
(6) Stock ideas – prefer MGR and DXS to GPT

MGR has longer leases (positive), and GPT has high exposure to the retail segment (negative). Each of these companies is trading at levels implying a c. 20% decline in office rents, keeping all else constant.

Both DXS and GPT have c. 40% of office expiries occurring between now and FY23, whilst MGR is relatively less exposed with just 24%. This is in part due to MGR's superior WALE of c. 6.5 years, vs. DXS's c. 4.5 years and c. 5 years for GPT. MGR is in a slightly more favourable position because it has a large number of recently developed or refurbished buildings backed by long lease tenants.

Exhibit 91:

Office expiry profile of the three major listed office landlords



Source: Company Data, Morgan Stanley Research estimates

In our DXS, MGR, and GPT models, we assume office rental income will decline 5% relative to pre-COVID as a one-off hit from October 2020. This is perhaps a conservative approach because any rent decline will be phased in depending on the timing of expiries – but implicitly, a one-off 5% decline in rental income is equivalent to 35% of leases suffering a rental decline of 15% (with the rest unchanged).

The table below highlights that whilst we have factored in a one-off 5% decline in rental income across the office portfolios, the current share prices of DXS, MGR, and GPT are implying declines of around 20% within the next 12 months, assuming all other factors are held constant. For instance, 42% of GPT's income is related to its (challenged) Retail portfolio, whilst 43% of MGR's income is derived from development profits, and 18% Retail. Meanwhile, DXS – whilst regarded as an office pure-play – is in fact just 73% office by income. As such, what is implied by the share price could move materially depending on the assumptions around retail, residential, and active development activities.

Exhibit 92:

What we have factored into our price targets – vs. implied by current share price

	Price Target (A$)	Share Price (A$)	Our PT driver	Implied by Share Price
DXS	11.00	8.98	-5% step change decline in rent - new normal	Share price factoring in -17.5%
MGR	2.40	2.09	-5% step change decline in rent - new normal	Share price fatoring -21%
GPT	3.80	4.12	-5% step change decline in rent - new normal	Share price factoring in -25%

Source: Refinitiv as of July 2020, Morgan Stanley Research estimates, IRESS (24 July 2020)

India: Resilience in Office Demand

Commercial demand for office property remains resilient vs. retail and hospitality businesses amid the COVID-19 lockdown. WFH does not appear to be a sustainable model in India given the country's physical and digital infrastructure, and property stocks appear to be pricing in a worst-case scenario. We expect near-term demand to be weak but catch up in 2021 and beyond. We expect negligible vacancy creation for top office owners because of WFH and 1-2% market rental growth.

DLF, Prestige, and Embassy Office Parks (EOP) are our key OW stocks with high leverage to the office business.

(1) Sizing the market

Pan-India commercial market: According to JLL REIS, the combined commercial stock across the top seven metros in India is 592msf as of 4Q19. Of this, Bangalore, Mumbai, and NCR are the three largest markets with completed office space of 135msf, 124msf, and 120msf, respectively, followed by Pune, Hyderabad and Chennai at ~62msf each and Kolkata at 26msf. Central Business District (CBD) contributes 36msf, Secondary Business District (SBD) is at 274msf and suburbs comprise 282msf in these seven metros.

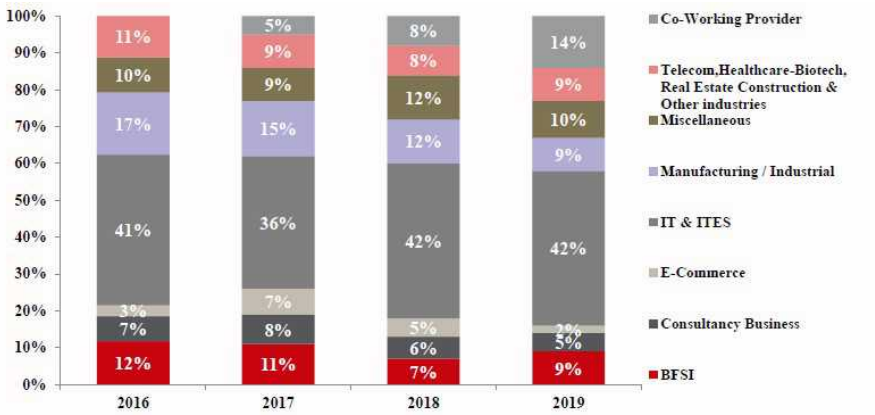
Office market reached new heights in 2019: Absorption and new completions were the highest ever at 46.5msf and 51msf in 2019, respectively. Office stock has now almost doubled since 2011 with an average vacancy of 13%, which is almost the lowest since 2008. 1Q20 data show a dip in absorption and new starts due to COVID-19-led uncertainties.

(2) Demand drivers by tenant mix

Internet and IT services are the largest contributors to office space demand: They made up 42% of Pan-India occupancy as of March 2020. Manufacturing and e-commerce segments have been shrinking over the last three years while new entrants, i.e., providers of co-working space, contributed 14% in 2019, up from 5% in 2017.

Exhibit 93:

Industry-wide tenancy mix

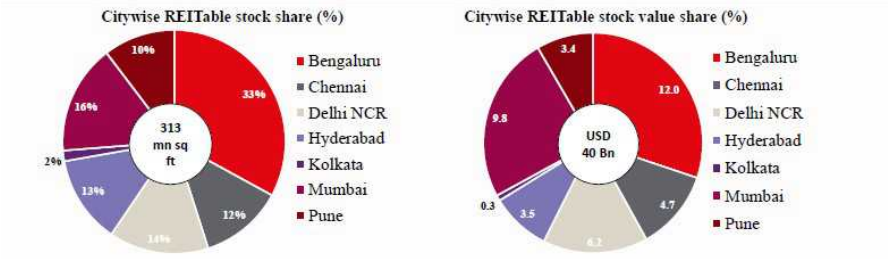


Source: JLL India

BFSI – Banking, Financial Services and Insurance

Exhibit 94:

Commercial stock that has the potential to go into REITs



Source: JLL India

(3) Key topics surrounding Indian office market and stocks

#1 – WFH: Investors have expressed concern about a potential demand slowdown for commercial assets with many Indian corporations allowing their employees to WFH amidst the lockdown. However, we believe this is unlikely to be sustainable in the long term because the country's physical and digital infrastructure does not appear supportive. Small homes with no personal work station and slow Internet speeds may not make WFH a viable model in India. Also, companies are focused on building their corporate culture, which may be more difficult if employees are based outside the office.

#2 – Rental revision: Demand may be subdued in the near term for re-leases (vacant areas) and new completions as a result of COVID-19. However, this should normalize in 6-12 months as underlying demand from tenants looks strong, in our view. India's tenant mix appears favourable, with the IT segment (42% contribution) remaining strong as global outsourcing by MNCs to India continuesin view of its cost advantage. According to JLL, Internet and IT services were the largest contributors to office space demand in 4Q19 with 42% of Pan-India occupancy. The manufacturing and e-commerce segments have been shrinking over the last three years, while the contribution of new entrants, such as co-working providers, has increased to 14% in 2019 from 5% in 2017.

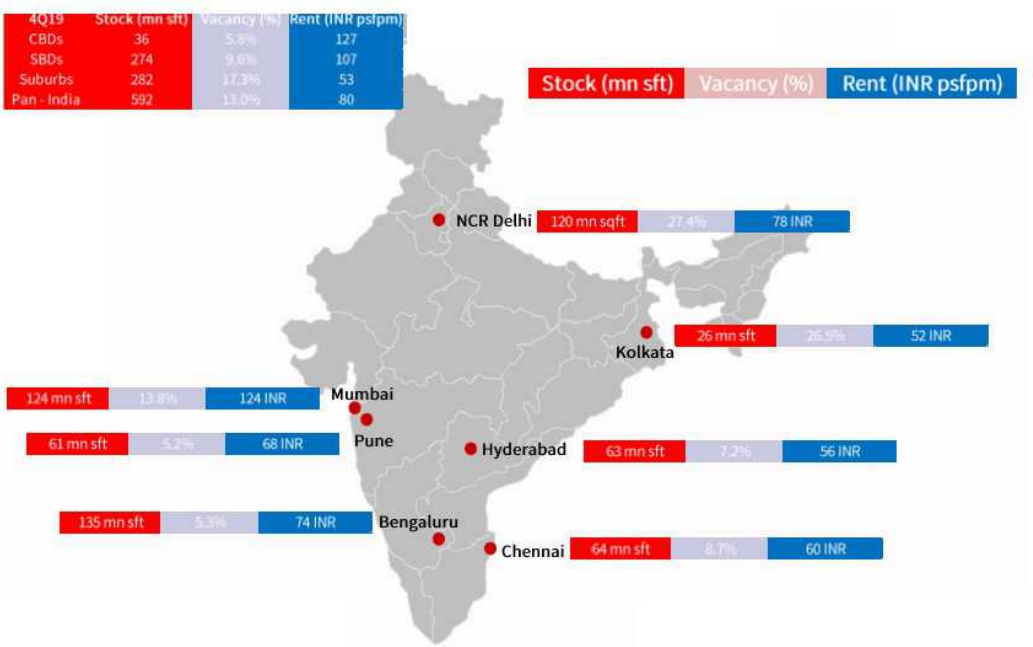
#3 – Revival of new construction: Migrant labourers have resumed work for most companies. Operations are at 60-65% of pre-COVID levels. This is expected to normalize in 2HF21, subject to the easing of lockdowns across the states. Most companies have deferred their construction/project completion time lines by ~6 months. However, the embedded value of the projects remains intact because there is comfort on project delivery for the Grade A developers.

#4 Industry consolidation: High commercial demand, low vacancies, and limited construction provides visibility on business sustainability and potential to scale up operations for quality asset owners. Developers with a strong balance sheet, project execution capability, quality assets providing premium infrastructure, presence in top metros, ability to scale up through acquisitions and partnerships should be able to gain market share in India.

#5 Demand for flexible space: We expect the demand for co-working or flexible space to increase over the next three years. However, there may not be any change in strategy for the large office landlords, which operate complexes and offer an entire ecosystem to their tenants. Their near-term focus remains on large occupiers such as Information Technology (IT) companies, BFSI, and manufacturing. Thus, the increase in demand for co-working spaces should benefit smaller landlords, standalone buildings, and lower-grade offices, which may have vacancies, in our view.

Exhibit 95:

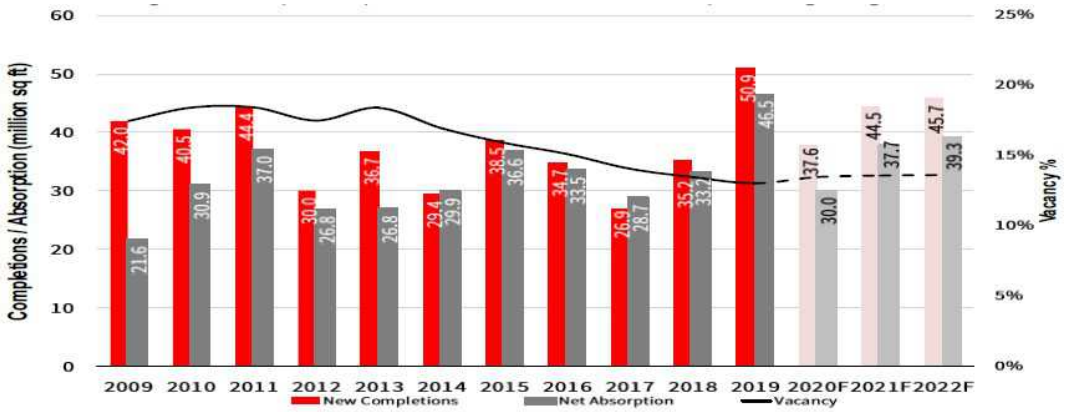
Grade-A office stock across the top seven metros



Source: JLL India

Exhibit 96:

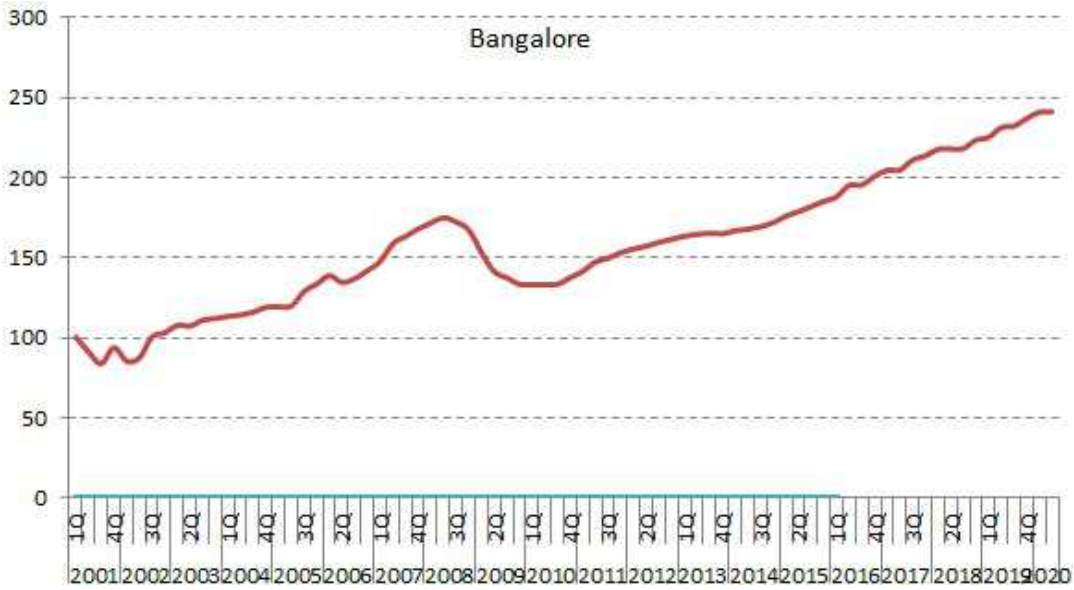
Net absorption, new completion and vacancy trends


Completions / Absorption (million sq ft)
Vacancy %
New Completions
Net Absorption
Vacancy
2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020F 2021F 2022F

Source: JLL India

Exhibit 97:

Bangalore – Commercial rental Index



Source: JLL, Morgan Stanley Research

Y-axis 100=2001

(4) India's office rental outlook

Resilience in the commercial segment: The nationwide lockdown in response to COVID-19 that was announced on March 24, 2020 restricted people's movements for non-essential services, and the government announced strict social distancing norms across states. During this period, companies kept their offices shut but implemented WFH arrangements to ensure business continuity. Commercial demand was resilient compared to retail and hospitality, which were under complete lockdown as leisure and business travel was halted. Rent collections during the lockdown months of April and May 2020 were 95%+ for most Grade A developers such as Embassy Office Parks, DLF, and Prestige Estates, even though the employee footfall was reduced to only 10-20% of pre-COVID levels. The balance of ~5% were tenants belonging to stressed segments like co-working space, aviation, retail, and hospitality.

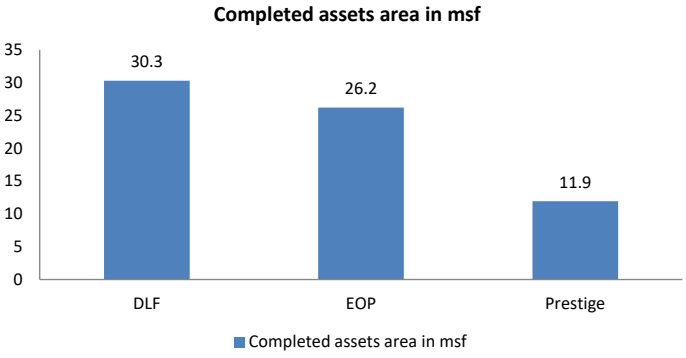
Sustainable growth ahead: India appears to be a preferred location for global multinationals thanks to the availability of a talent pool, customized product offerings, and competitive rents vs. other regional markets. Organized players are well poised to gain market share in view of limited stock of Grade-A assets, low vacancy rates (on a normalized level ex-COVID-19), infrastructure improvement, and improving transparency with better regulations.

(5) Stocks exposed to the office segment

DLF, EOP REIT, Prestige Estate and Oberoi: These companies have built commercial portfolios over the last two decades. DLF has the largest portfolio of commercial rent-yielding assets of 30.3msf, followed by Embassy Office Parks at 26.2msf, Prestige at 11.9msf, and Oberoi at 1.1msf.

Exhibit 98:

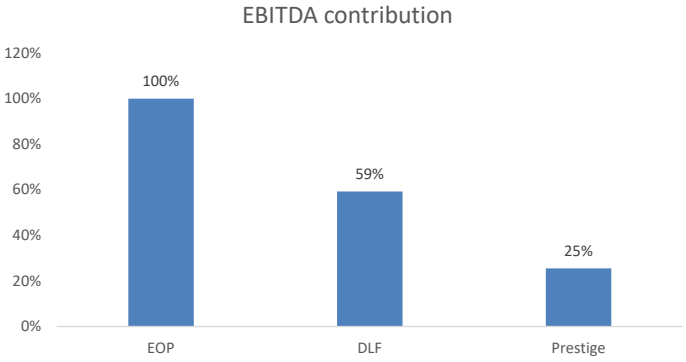
Rent-yielding assets by company



Source: Company data, Morgan Stanley Research

Exhibit 99:

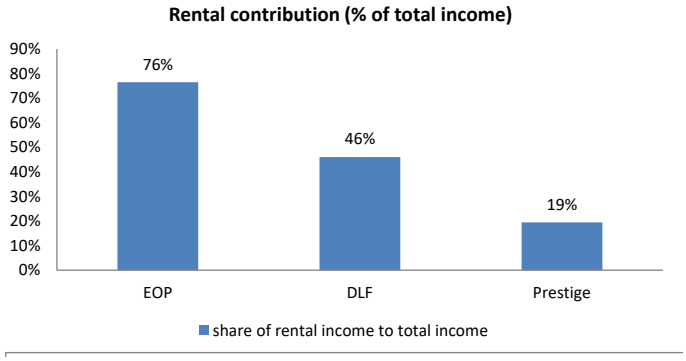
EBITDA contribution by company



Source: Company data, Morgan Stanley Research

Exhibit 100:

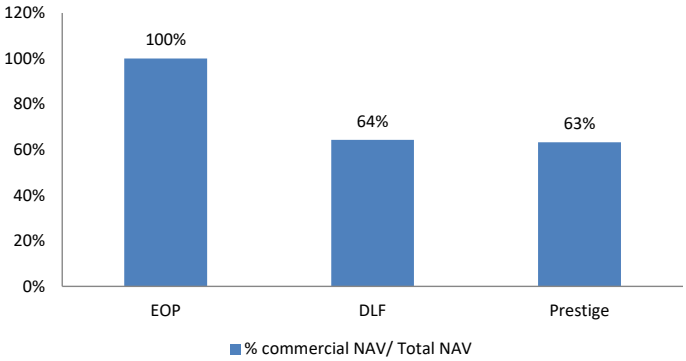
Rental contribution by company (% of total revenues)



Source: Company data, Morgan Stanley Research

Exhibit 101:

Rental contribution to Gross NAV by company



Source: Company data, Morgan Stanley Research

(6) Stock picks

Physical market offers a mixed outcome: The office business in India has been resilient but residential has declined sharply because of the loc down and subsequent economic slowdown. We expect residential demand to recover in ensuing quarters as macro headwinds abate.

At the same time, we see two powerful trends that should support residential demand:

1. Meaningfully improved affordability (owing to flat property prices over the last four years versus 6-8% income growth p.a.), and
2. Demand migration from smaller unorganized players to branded organized developers.

Stocks have fallen sharply: Nifty Real Estate is down 33% YTD, significantly underperforming the Nifty 50, down 8%. The NAV discount for the industry has expanded to ~55%, 1 SD below the mean. Valuations appear even lower than the lows reached during currency replacement in 2016.

Stock preferences: Given the deeply discounted valuations and our expectation of a gradual recovery in the physical market, we have an Attractive industry view.

Our OW rated stocks include DLF, Prestige, Sobha, and EOP, while Oberoi is EW and Godrej is UW. Within our coverage, DLF is the top pick given its diversified business model, which includes both office and residential business, a new asset creation cycle, steadily improving balance sheet and inexpensive valuation. The company's plans to focus on middle-income housing and 'sell as you build' should help improve near-term cash flows.

Exhibit 102:

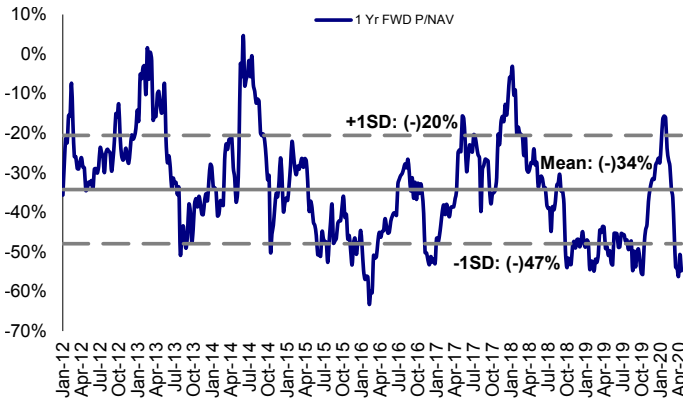
Coverage stocks: Companies with a commercial presence include Prestige, DLF, Oberoi and Embassy Office Parks REIT

Company	Eikon Ticker	MS View	Currency	Last close	Price Target	Upside/ Downside
Prestige Estates Projects Ltd	PREG.NS	Overweight	INR	180	340	89%
Sobha Developers Ltd.	SOBH.NS	Overweight	INR	234	361	54%
DLF Limited	DLF.NS	Overweight	INR	143	211	47%
Oberoi Realty Limited	OEBO.NS	Equal-weight	INR	348	360	3%
Godrej Properties Limited	GODR.NS	Underweight	INR	898	682	-24%
Embassy Office Parks REIT	EMBA.NS	Overweight	INR	348	423	22%

Refinitiv, Morgan Stanley Research estimates; prices as of 21 July 2020.

Exhibit 103:

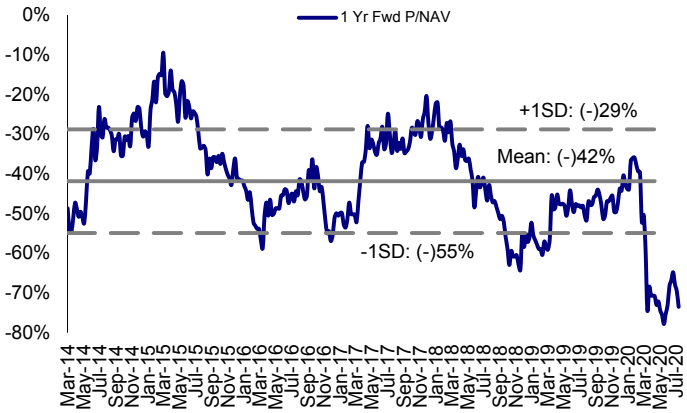
DLF – One year forward discount to NAV



Source: Refinitiv, Morgan Stanley Research estimates

Exhibit 104:

Prestige Estate – One year forward discount to NAV



Source: Refinitiv, Morgan Stanley Research estimates

China: Shanghai Office Less Affected by WFH

Shanghai and other major cities in China are keeping offices open and the majority of companies are not planning to have a permanent WFH plan. The TMT industry accounts for only 7% of CBD office space.

On the cyclical front, vacancy rates remain elevated at around 20% as of 1Q20. Overall market value/rent peaked in 1Q18 and declined by 3% QoQ and 9% YoY in 1Q20 to US$2 per sq. m per day.

In terms of stocks, Swire Properties and SHKP generated 3% and 2%, respectively, of their rental income from the Chinese office segment and should benefit from the V-shaped recovery in the economy that our economics team for China is expecting.

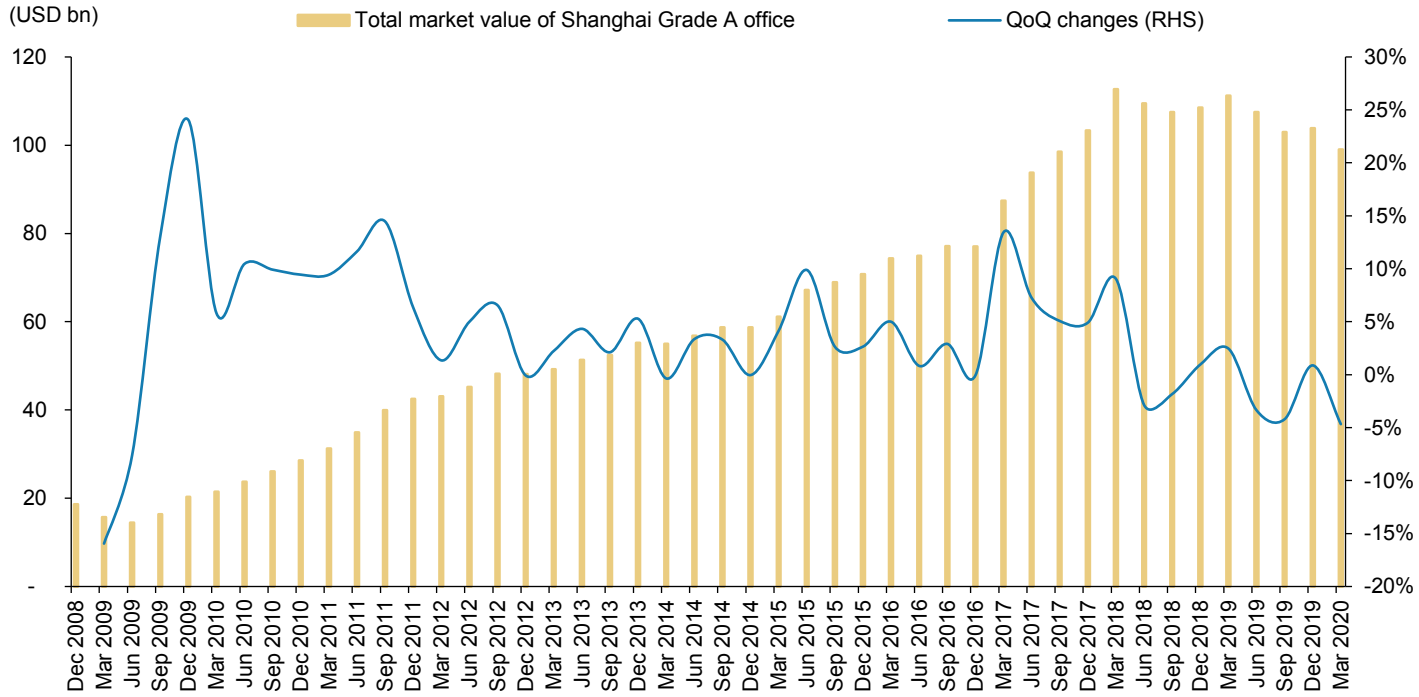
(1) Sizing the market

As of 1Q20, Shanghai had 13.58mn sqm of Grade A office, with an average capital value of US$7,291/sqm, or total office market value of US$99bn. The total market value of Grade A office in Shanghai has been on a downward trend since 1Q18, as the average capital value declined from a peak of US$9,156/sqm in 1Q18.

Because of COVID-19, the vacancy rate of Shanghai Grade A office reached its highest level of 19.6% in 1Q20, as a large proportion of employees WFH during the outbreak. Also, many landlords offered a deferral or discount on rental payments to tenants, which led to declining rents in the overall market. As of 1Q20, gross rents for Shanghai Grade A office declined 3% QoQ and 9% YoY, to US$2.01/sqm per day, a similar rental level to 3Q19.

Exhibit 105:

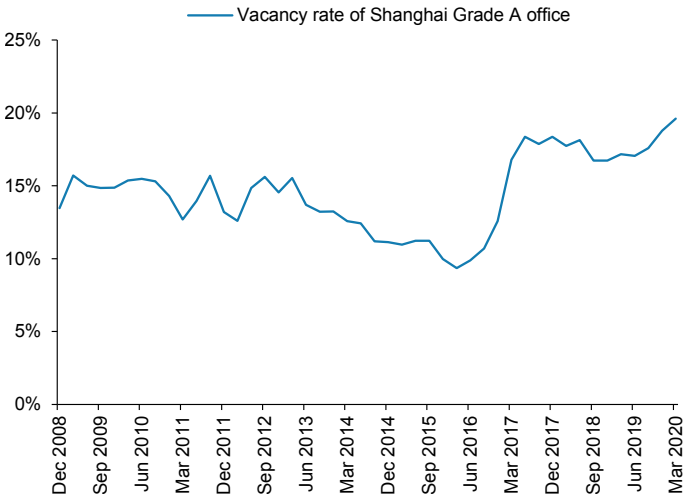
Total market value of Shanghai Grade A office



Source: JLL, Morgan Stanley Research.

Exhibit 106:

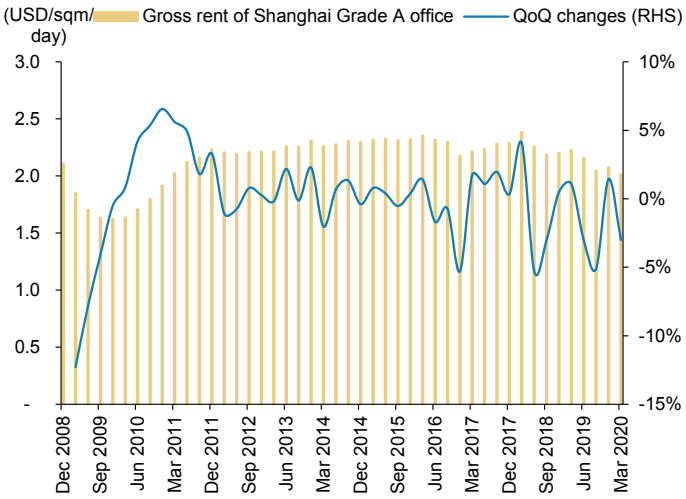
Vacancy rate for Shanghai Grade A office



Source: JLL, Morgan Stanley Research.

Exhibit 107:

Gross rent for Shanghai Grade A office



Source: JLL, Morgan Stanley Research.

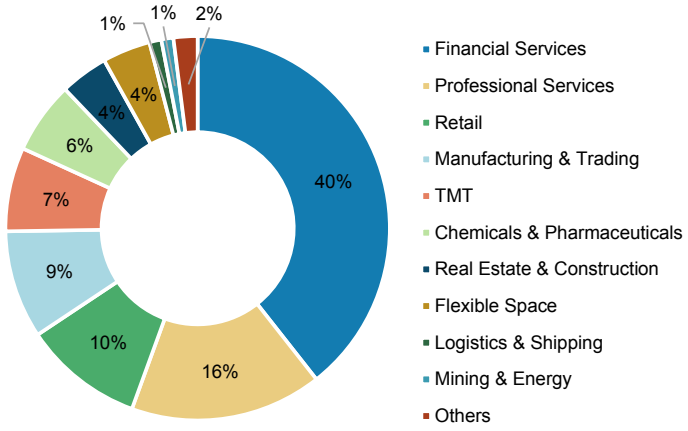
(2) Tenant mix of Shanghai office

The tenant mix in Shanghai's CBD and its decentralized market shows different tenant profiles. For the CBD, financial services constituted 40% of total tenant size, followed by professional services at 16%, retail at 10%, manufacturing & trading at 9%, and TMT at 7%. The decentralized market, by contrast, shows financial services at 28% of total tenant size, followed by TMT at 17%, manufacturing & trading at 17%, retail at 12%, and professional services at 8%.

According to JLL, some industries, such as retail & hospitality and manufacturing & trading, face near-term challenges amid the COVID-19 outbreak, but TMT, healthcare and financial services were more resilient given the policy support and rising demand.

Exhibit 108:

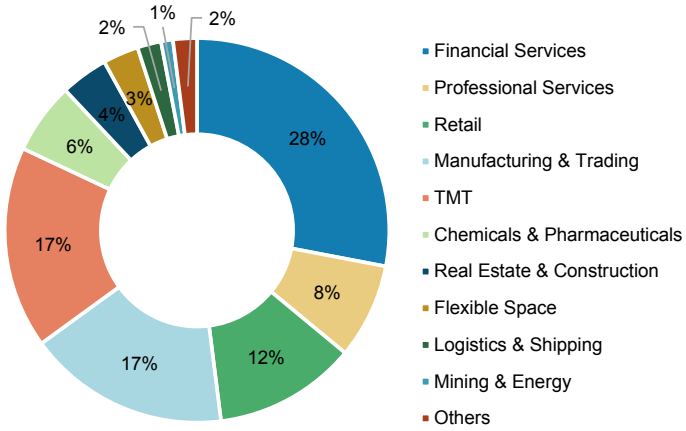
Shanghai CBD tenant profile, as of 1Q20



Source: JLL, Morgan Stanley Research.

Exhibit 109:

Shanghai decentralized tenant profile, as of 1Q20



Source: JLL, Morgan Stanley Research.

(3) Impact of COVID-19 on China's office market

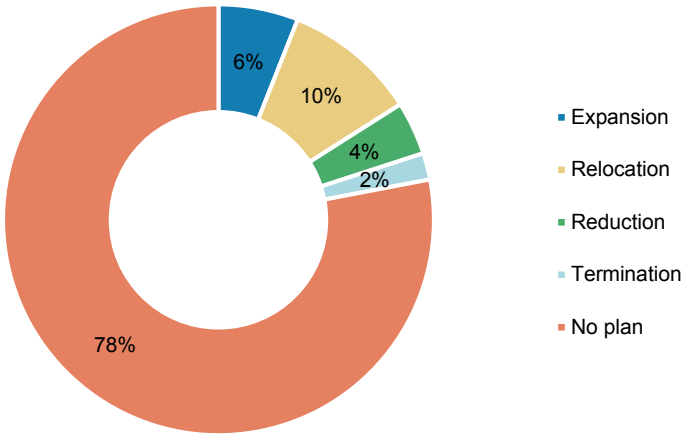
The outbreak of COVID-19 will not have a significant, long-term impact on China's office market, in our view, because most companies prefer their employees to work from the office. While some TMT companies offer more flexible working arrangements to employees, they account for only 7% of tenants in Shanghai CBD office, and 17% of tenants in Shanghai's decentralized office.

According to the recent Cushman & Wakefield survey, 78% of the interviewed companies have no plan to relocate/expand/reduce their office spaces in the short term, and only 6% of companies have considered reducing their office space or terminating their office lease. For companies with relocation or expansion plans, 54% of them delayed the plan due to the outbreak, and only 4% canceled the plan altogether.

During the outbreak period, WFH did allow companies to maintain normal operations, but we don't think it can be a replacement for physical office space in the long term. According to the Cushman & Wakefield survey, only 21% of the companies they interviewed are considering changing their working arrangements to allow WFH in the future.

Exhibit 110:

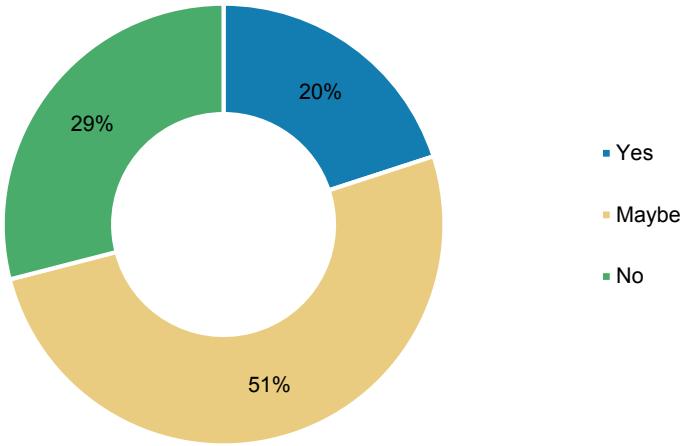
Expansion or relocation plans of interviewed companies



Source: Cushman & Wakefield, Morgan Stanley Research.

Exhibit 111:

Whether the interviewed companies will adopt WFH for employees in the future



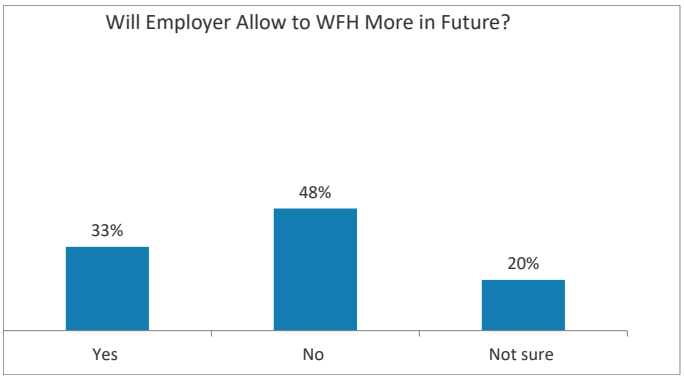
Source: Cushman & Wakefield, Morgan Stanley Research.

Appendix

(A) AlphaWise survey on WFH

Exhibit 112:

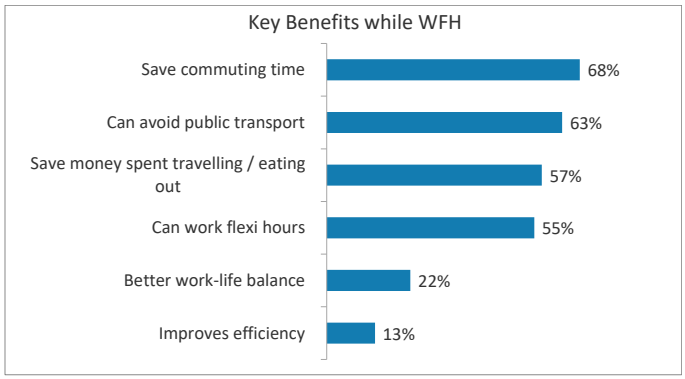
HK WFH survey – perception of employer



Source: AlphaWise, Morgan Stanley Research

Exhibit 113:

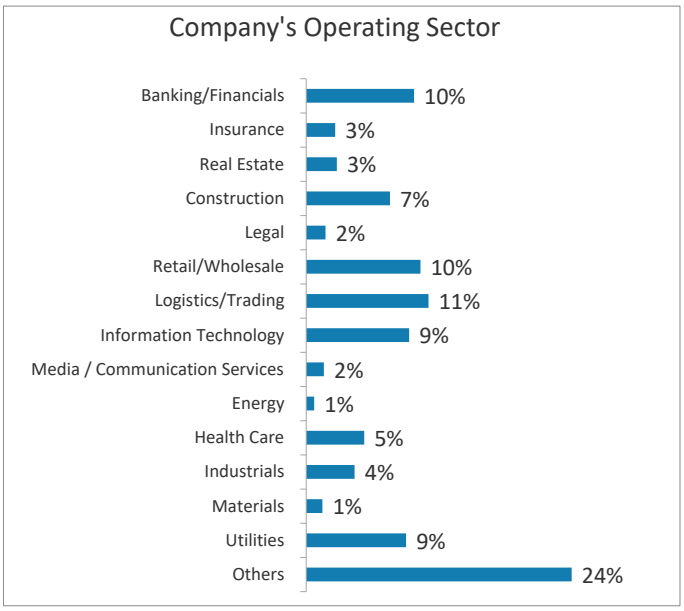
HK WFH survey – key benefits of WFH



Source: AlphaWise, Morgan Stanley Research

Exhibit 114:

HK WFH survey – Respondents Sector



Source: AlphaWise, Morgan Stanley Research

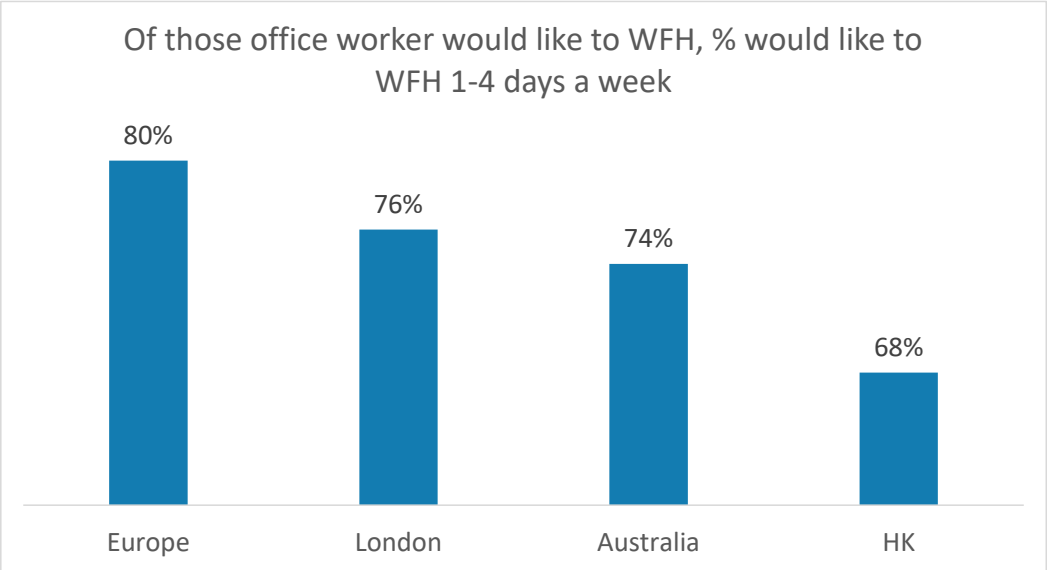
Exhibit 115:

HK WFH survey – Respondents Occupation

Source: AlphaWise, Morgan Stanley Research

Exhibit 116:

Intention to WFH 1-4 days a week



Source: AlphaWise survey, Morgan Stanley Research

(B) Summary of Asian property stocks' exposure to office

Exhibit 117:

Major stocks exposed to office rental business

	17-Jul-20	Ticker	Yr. End	Office EBIT Contribution FY0	Office as % of total GAV Current
Hong Kong	Sun Hung Kai Properties	0016.HK	Jun	15%	23%
	Swire Properties	1972.HK	Dec	52%	50%
	HK Land	HKLD.SI	Dec	45%	45%
Singapore	Keppel REIT	KASA.SI	Dec	100%	100%
	CACT	CACT.SI	Dec	78%	85%
	Suntec REIT	SUNT.SI	Dec	70%	75%
Australia	Dexus	DXS.AX	Jun	73%	84%
	Mirvac	MGR.AX	Jun	35%	53%
	GPT	GPT.AX	Dec	36%	41%
Japan	Mitsubishi Estate	8802.T	Mar	60%	86%
	Sumitomo R&D	8830.T	Mar	54%	81%
	Mitsui Fudosan	8801.T	Mar	27%	60%
India	DLF	DLF.NS	Mar	59%	64%
	Embassy Office Parks	EMBA.NS	Mar	100%	100%
	Prestige Estate	PREG.NS	Mar	25%	63%

Source: Company data, Morgan Stanley Research

(C) Quotes from companies regarding WFH

Leading international executives have commented on their companies' experiences with WFH and increasing workforce flexibility

Exhibit 118:

Global feedback on WFH and workplace flexibility

Company	Quotes
Fujitsu	According to Fujitsu's press release in July 2020, Fujitsu can return 50% of its office footprint in Tokyo over time.
Tata Consultancy Services (TCS) – 450K Employees	"...Believe that by 2025, only 25% of our associates will need to work out of our facilities at any point of time." Rajesh Gopinathan, CEO, TCS. (Source: Financial Express May 2020)
Twitter	Employees are allowed to work from home permanently, even after the coronavirus pandemic lock down passes. (Source: Guardian May 2020)
Facebook - 45K Employees	"As much as 50 percent of the workforce could be working entirely remotely in the next 5-10 years." Mark Zuckerberg, CEO, Facebook. (Source: CNBC May 2020)
Mondelez	"Maybe we don't need all the offices that we currently have around the world. So there is a major effort ... taking place as it relates to the costs in the business." Dirk Van De Put, CEO, Mondelez. (Source: CNBC May 2020)
Barclays	"The notion of putting 7,000 people in a building may be a thing of the past." Jes Staley, CEO, Barclays. (Source: Reuters Apr 2020)

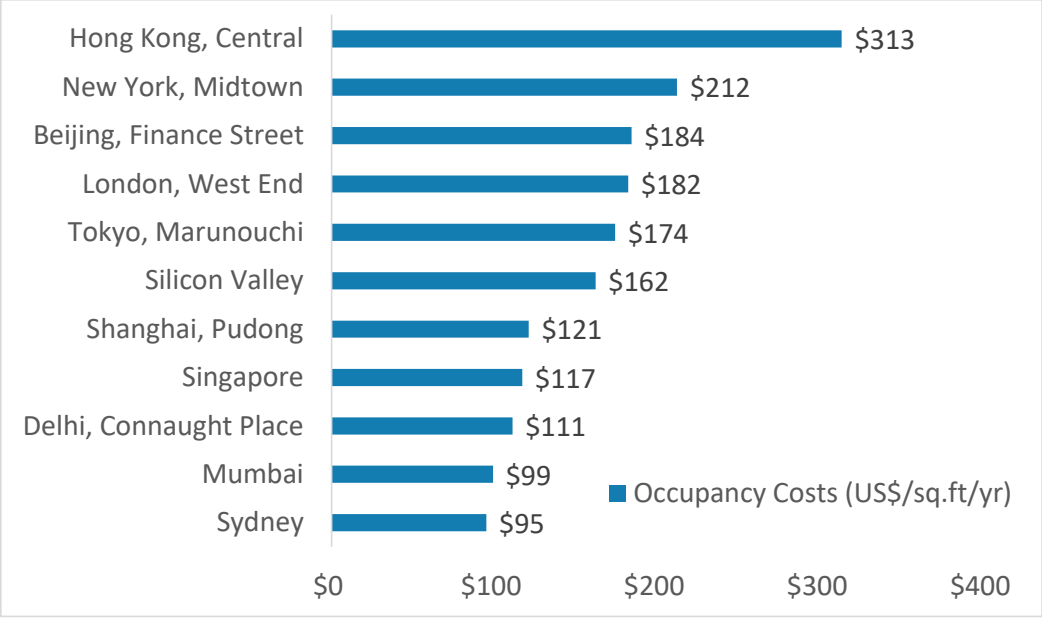
Source: Respective newspaper and company announcements

(D) Premium office rental comparison

As shown in **Exhibit 119** , Hong Kong Central remains the most expensive office location in the world.

Exhibit 119:

Gross office rents in prime areas in key cities globally



Source: JLL, Morgan Stanley Research

(E) Cap rate expansion likely

As shown in **Exhibit 120** , Hong Kong, Brisbane, and Perth are the only three cities in Asia Pacific that are expected to show cap rate expansion for core location Grade A offices in 2020.

On a separate note, Sydney and Tokyo are yielding much higher spreads over 10-year bonds, suggesting higher risk on office rental.

Exhibit 120:

2020 Office Cap Rate Outlook

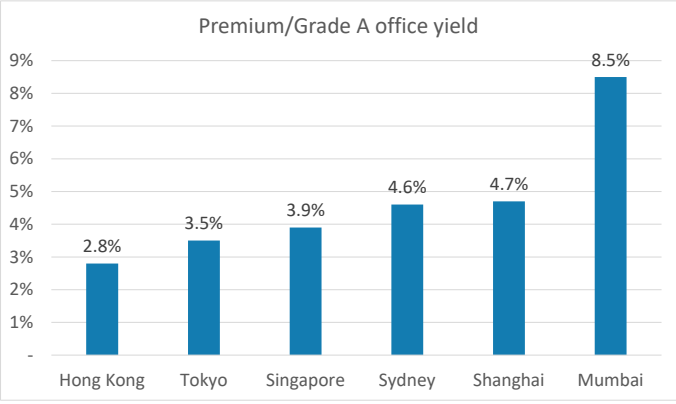
Country	City	Grade A Office	
		Core Locations	Decentralized
Australia	Sydney	◀▶	▲
	Melbourne	◀▶	▲
	Brisbane	▲	▲
	Perth	▲	▲
Greater China	Beijing	◀▶	▲
	Shanghai	◀▶	▲
	Guangzhou	◀▶	▲
	Shenzhen	◀▶	▲
	Hong Kong SAR	▲	▲
	Taipei	◀▶	◀▶
Japan	Tokyo	◀▶	▲
	Osaka	◀▶	▲
Korea	Seoul	◀▶	◀▶
Singapore	Singapore	◀▶	▲
India	Gurgaon	◀▶	◀▶
	Mumbai	◀▶	◀▶
	Bangalore	◀▶	◀▶

Source: CBRE Research, Jun 2020

The survey was conducted from May 26 to June 1, 2020

Exhibit 121:

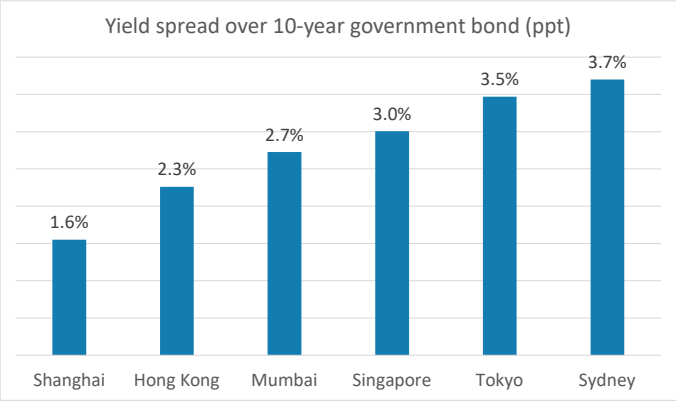
Asian cities office yield comparison



Source: Colliers June 2020

Exhibit 122:

Office yield spread over 10-year bond yield



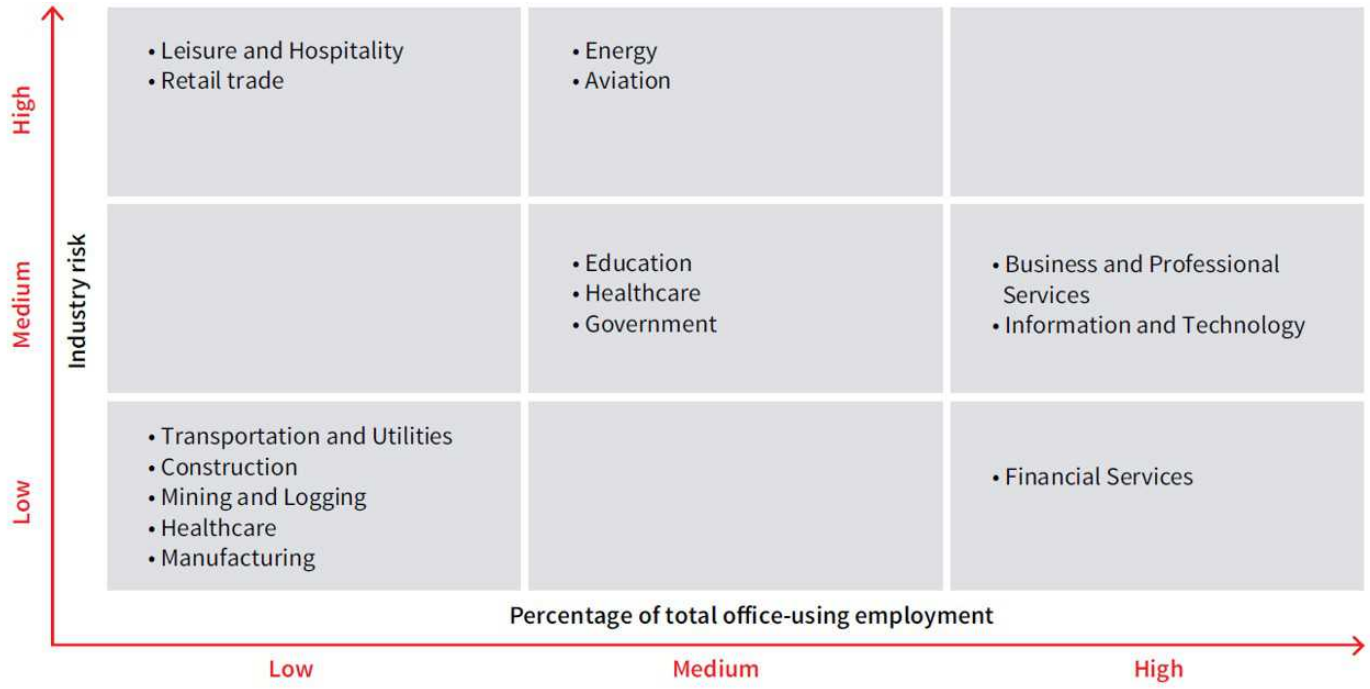
Source: Colliers June 2020, 10-year bond yield based on respective government benchmark yield as of Jul, 2020 close

(F) Office demand matrix

JLL categorizes the degree of susceptibility to structural office demand disruptions in different trade mixes. Financial activities, business and professional services and IT have the bulk of office-based employment while trades like construction and manufacturing are facing less risk.

Exhibit 123:

Office demand matrix



Source: JLL, Morgan Stanley Research

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Global Stock Ratings Distribution

(as of June 30, 2020)

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	Coverage Universe		Investment Banking Clients (IBC)			Other Material Investment Services Clients (MISC)	
Stock Rating Category	Count	% of Total	Count	% of Total IBC	% of Rating Category	Count	% of Total Other MISC
Overweight/Buy	1252	39%	323	43%	26%	565	38%
Equal-weight/Hold	1430	44%	336	45%	23%	690	47%
Not-Rated/Hold	5	0%	0	0%	0%	3	0%
Underweight/Sell	553	17%	84	11%	15%	225	15%
Total	3,240		743			1483	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

Analyst Stock Ratings

Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

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Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

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INDUSTRY COVERAGE: Hong Kong Property

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/27/2020)
Hildy Ling		
Champion REIT (2778.HK)	U (08/20/2019)	HK$3.93
Fortune REIT (0778.HK)	U (07/27/2020)	HK$6.70
Hongkong Land (HKLD.SI)	O (07/21/2015)	US$3.77
Hysan Development Company Ltd. (0014.HK)	E (01/14/2019)	HK$21.30
Link REIT (0823.HK)	E (06/02/2020)	HK$58.55
Swire Properties (1972.HK)	O (11/09/2017)	HK$17.30
Wharf Real Estate Investment Company Ltd (1997.HK)	U (07/20/2020)	HK$28.00
Praveen K Choudhary		
CK Asset Holdings Ltd (1113.HK)	E (04/29/2019)	HK$42.60
Hang Lung Properties Ltd. (0101.HK)	O (01/15/2018)	HK$18.84
Henderson Land (0012.HK)	E (10/31/2019)	HK$28.30
Kerry Properties (0683.HK)	E (12/30/2019)	HK$18.38
New World Development (0017.HK)	O (03/16/2020)	HK$36.20
Sino Land (0083.HK)	E (04/29/2019)	HK$9.26
Sun Hung Kai Properties (0016.HK)	O (09/02/2011)	HK$91.65
Wharf Holdings (0004.HK)	O (01/14/2019)	HK$12.94

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* Historical prices are not split adjusted.

INDUSTRY COVERAGE: India Property

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/27/2020)
Sameer Baisiwala, CFA		
DLF Limited (DLF.NS)	O (11/25/2019)	Rs136.20
Embassy Office Parks REIT (EMBA.NS)	O (05/02/2019)	Rs361.68
Godrej Properties Limited (GODR.NS)	U (06/21/2019)	Rs871.50
Oberoi Realty Limited (OEBO.NS)	E (04/29/2020)	Rs381.40
Prestige Estates Projects Ltd (PREG.NS)	O (05/17/2012)	Rs172.55
Sobha Developers Ltd. (SOBH.NS)	O (05/25/2010)	Rs227.15

Stock Ratings are subject to change. Please see latest research for each company.
* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Australia Property

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/27/2020)
Lauren A Berry		
Mirvac Group (MGR.AX)	E (02/06/2020)	A$2.11
Stockland (SGP.AX)	O (06/04/2020)	A$3.28
Simon Chan		
Arena REIT (ARF.AX)	O (06/03/2020)	A$2.25
Charter Hall Group (CHC.AX)	O (10/29/2019)	A$10.21
Charter Hall Retail REIT (CQR.AX)	U (10/29/2019)	A$3.22
Dexus (DXS.AX)	O (03/11/2020)	A$8.89
Goodman Group (GMG.AX)	O (10/29/2019)	A$16.55
GPT Group (GPT.AX)	U (10/29/2019)	A$4.09
Lendlease Group (LLC.AX)	++	A$11.73
National Storage REIT (NSR.AX)	E (04/03/2020)	A$1.90
Scentre Group (SCG.AX)	O (04/03/2020)	A$2.14

Shopping Centres Australasia Property Gr (SCP.AX)	O (04/03/2020)	A$2.25
Vicinity Centres (VCX.AX)	U (10/29/2019)	A$1.40
Waypoint REIT Ltd (WPR.AX)	U (10/29/2019)	A$2.73

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INDUSTRY COVERAGE: ASEAN Property

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/27/2020)
Mulya Chandra, CFA		
Alam Sutera Realty (ASRI.JK)	E (11/01/2019)	Rp128
Bumi Serpong Damai (BSDE.JK)	O (01/08/2015)	Rp730
Ciputra Development (CTRA.JK)	O (04/15/2019)	Rp655
Lippo Karawaci (LPKR.JK)	U (08/07/2018)	Rp141
Pakuwon Jati (PWON.JK)	O (08/07/2018)	Rp428
Summarecon Agung (SMRA.JK)	U (04/20/2020)	Rp620
Wilson W Ng, CFA		
Ascendas Real Estate Investment Trust (AEMN.SI)	O (06/04/2013)	S$3.52
Ascott Residence Trust (ASCO.SI)	E (01/09/2020)	S$0.92
Asset World Corp PCL (AWC.BK)	U (03/26/2020)	Bt4.02
Ayala Land (ALI.PS)	O (10/26/2017)	PP31.90
CapitaLand (CATL.SI)	O (06/10/2014)	S$2.82
CapitaLand Commercial Trust (CACT.SI)	E (06/27/2018)	S$1.69
CapitaLand Mall Trust (CMLT.SI)	E (02/08/2017)	S$1.97
CDL Hospitality Trusts (CDLT.SI)	U (02/24/2020)	S$0.99
Central Pattana PCL (CPN.BK)	O (03/29/2019)	Bt49.00
City Developments (CTDM.SI)	O (03/31/2016)	S$8.17
ESR Cayman Ltd (1821.HK)	O (12/06/2019)	HK$17.98
Frasers Logistics & Commercial (FRAE.SI)	E (07/20/2016)	S$1.26
Keppel REIT (KASA.SI)	O (08/23/2018)	S$1.09
Land and Houses PCL (LH.BK)	E (03/26/2020)	Bt7.55
Megaworld Corporation (MEG.PS)	U (12/27/2019)	PP3.02
Quality Houses PCL (QH.BK)	U (03/29/2019)	Bt2.16
Robinsons Land Corporation (RLC.PS)	O (04/23/2019)	PP15.00
SM Prime Holdings (SMPH.PS)	E (12/27/2019)	PP30.30
Suntec REIT (SUNT.SI)	U (08/23/2018)	S$1.39
UOL Group Limited (UTOS.SI)	E (03/31/2016)	S$6.64
Vinhomes JSC (VHM.HM)	O (06/18/2018)	VND70,900.00

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* Historical prices are not split adjusted.

INDUSTRY COVERAGE: Real Estate

COMPANY (TICKER)	RATING (AS OF)	PRICE* (07/27/2020)
Atsuro Takemura		
KATITAS (8919.T)	E (11/23/2019)	¥2,509
Mitsubishi Estate (8802.T)	E (07/01/2020)	¥1,586
Mitsui Fudosan (8801.T)	U (07/01/2020)	¥1,814
Sumitomo Realty & Dev. (8830.T)	E (07/01/2020)	¥2,821

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托福雅思备考资料	大学物理学科攻略合集	动漫自学教程
SCI 最全写作攻略	TEM4/TEM8 专四专八备考资料	教师资格证面试试讲万能模板
360 份精美简历模板	数学建模 0 基础从入门到精通	100 套快闪 PPT 模板
Vlog 制作最全攻略	超强 PR 模板	42 套卡通风 PPT 模板
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327 套水彩风 PPT 模板	295 套手绘风 PPT 模板	54 套毕业答辩专属 PPT
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吉他自学教程（送 6000 谱）	钢琴自学教程（送 1000 谱）	区块链从入门到精通资料
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日语自学教程	韩语自学教程	PHP 从入门到精通教程
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全国翻译专业资格考试备考资料	BEC 初级+中级+高级全套备考资料	大数据学习资料
SPSS 自学必备教程	Origin 自学必备教程	会计实操资料
LaTeX 全套教程+模板	EndNote 教程+模板	小提琴 0 基础入门自学教程
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